



AMERICAN ARTISAN and Hardware Record

Vol. 62, No. 26.

CHICAGO, DECEMBER 30, 1911.

\$2.00 Per Year

**"Red Devil"
Tools**



**"Red Devil"
Tools**

1912

WELCOME THE NEW YEAR

We wish to thank the Trade for their generous patronage during the past year.

We shall continue to serve our customers to the best of our ability, and during the coming year we shall put forth every effort to further the interests of our patrons.

May the New Year bring you Health, Wealth and Happiness.

Smith & Hemenway Co.

150 Chambers St., NEW YORK CITY

**"Red Devil"
Tools**



**"Red Devil"
Tools**

*"Though your paths in life may differ,
Since the hour when first ye met,
Have faith in one another—
Ye may need that friendship yet."*

TO THE STOVE TRADE

Dealers—Jobbers—Manufacturers

WE HOPE THAT

Your "1912 Model" of Prosperity

will be a self-starting, sweet-running, Six Cylinder, with 4 speeds forward and "no reverse," and that you may drive it daily on the Highway of Happiness.

We Wish You Well

STOVE & RANGE CO. OF PITTSBURGH

PITTSBURGH, PA.

We Wish You A Happy and Prosperous New Year!

We Also Hope You'll Form the Good Resolution

to advocate good Warm Air Heating, and that you will not be influenced to make prices to meet competition that will necessitate doing cheap work with consequent results that injure the business.

Uplifting the Warm Air Heating Business

is simply a matter of installing the right heaters of ample size and installing properly; and this class of work will surely bring every dealer a better and more reliable business with larger profits.

As a Means to This End

we suggest that you put a sample KELSEY WARM AIR GENERATOR on your floor and that you talk KELSEY FRESH AIR HEATING to your trade, and on Jan. 1st, 1913, you will have realized your share of prosperity.

KELSEY HEATING COMPANY

SYRACUSE, N. Y.

New York Office
156 Fifth Avenue

Chicago
608 Lake Street



1912

May this be the most prosperous and happiest year you have ever known, and may each succeeding year see an increase in your happiness and good fortune.



**A HAPPY NEW YEAR
TO ALL**



**Quality Stove &
Range Co.**

Belleville, - Illinois



GREETINGS

— TO THE TRADE —

We wish to assure you
of our hearty appreciation of past favors.
We are not unmindful of the valuable assistance we have received from you in pushing the sales of

"THE FOSTER LINE"
of Stoves and Ranges.

We wish you all a
PROSPEROUS and HAPPY
NEW YEAR

The Foster Stove Co.

IRONTON, OHIO

"The Foster Line"

30 years of continuous and successful operation. Every stove guaranteed to give satisfaction or your money cheerfully refunded.

In this issue we take pleasure in introducing **Foster's Regal**. It is made in sizes 12, 14, 16 and 18. All sizes can be fitted with hard coal magazines at a slight additional cost. The drums are made of heavy Wood's Oak Stove Body Steel. **Foster's Regal** warms the floor like a base burner, shows the fire like an open grate and holds it over night like an air tight

Comfort, efficiency and economy. Just what you want. Get our prices.



FOSTER'S REGAL
NOTE
LEVER HANDLES


The Foster Stove Co.

IRONTON, OHIO

WESTERN BRANCH, KANSAS CITY, MO.

NORTHWESTERN AGENTS { S. A. Stellwagen, 616 Boston Block, Minneapolis, Minn.
M. F. Stellwagen, 909 Logan Ave. N., Minneapolis, Minn.


PACIFIC COAST AGENT—Messrs. Cohn & McVey, Portland, Ore.



To Our Friends
To Our Patrons
To the Trade
Generally

We Wish You All A

Happy New Year



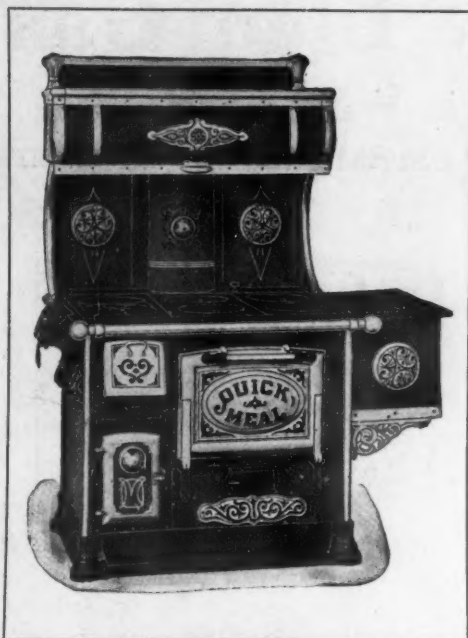
"May You Live Long
and Prosper"

Portsmouth Stove
& Range Company

PORTSMOUTH, OHIO

"Quick Meal" Steel Range

The outside walls are asbestos lined. These walls have an inside covering of porcelain enameled steel—which is not only rust-proof, but deflects the heat back into the oven and prevents it radiating through the outside body of the range :: :: :: :: ::



Absolutely Rust Proof

The back flue—the inner walls—the extreme bottom of the bottom flue—are porcelain lined. This not only makes the Body rust proof, but Creosote or other substance will not affect it, thus making the "Quick Meal" Steel Range absolutely the most durable steel range made :: ::

RINGEN STOVE CO.

D. OF
AMERICAN
STOVE CO.

SAN FRANCISCO, CAL.
Indiana St., Between 20th and 21st

410-412-414 North Sixth St.
ST. LOUIS, MO.

NEW CATALOGUE
MAILED ON APPLICATION



Cut showing
rolling top
partially raised

THE SEARCHLIGHT UTILITY Return Flue Floor Heater

The Only Genuine Base Burner

It has 243 cubic inches greater heating capacity than the ordinary base burner.

Do You Know What This Means? Why, it means three times the amount of heat from the same amount of coal and a much more even distribution of the heat throughout the rooms.

Your customers will of course be using **The Searchlight Utility** when its qualities become evident.

Why not be the one to sell this up-to-date stove? Write today for circulars giving detailed description.

The Utility Stove and Range Company

Office: 216 Board of Trade Building

INDIANAPOLIS, INDIANA

A-B New Idea Gas Ranges

Have a Way of Selling When
Other Ranges Will Not Sell



Never before were so many practical conveniences and luxurious features combined in so compact and beautiful a form.

There is an air of distinction about the **A-B New Ideas** which make them always quick sellers whether in the higher priced models or in the more economical type.



That's what the dealers say in speaking of this great "Sanitary Line of Ranges." It is because there are so many new features, so many conveniences, so much of neat clean beauty, so many irresistible talking points about the

"A-B New Idea"

Write for Our Special Proposition

A-B STOVE COMPANY,

BATTLE CREEK

MICHIGAN



PERFECT SATISFACTION

is guaranteed your range trade if you handle the

Champion Interchangeable Gas and Coal Range

Burns gas in the summer—either natural or manufactured—and coal in the winter.

A few minutes is ample time for changing from one fuel to the other. Supplies the demand for a range adapted to any kind of weather. Prices and descriptions on application. Write at once.

THE CHAMPION STOVE CO.,

Cleveland
Small City

Ranges CHEAP—Not CHEAP Ranges

You can buy of me, steel ranges that will out-class any catalogue-house ranges. Positively the best ranges obtainable for the money.

WILLARD STEEL RANGES

are good, honest quality, durable, economical ranges at a L-O-W P-R-I-C-E. They are made well, bake well, cook well and Sell Well.

QUICK SELLERS, GOOD PROFIT.

There is an enormous demand for Willard Steel Ranges. Extensively advertised; people know them—want them—and the quicker you get them in stock the more money you'll make. For the good of your pocketbook—write. I make you the greatest proposition on ranges ever offered.

Your own name plate on ranges on orders of ten or more

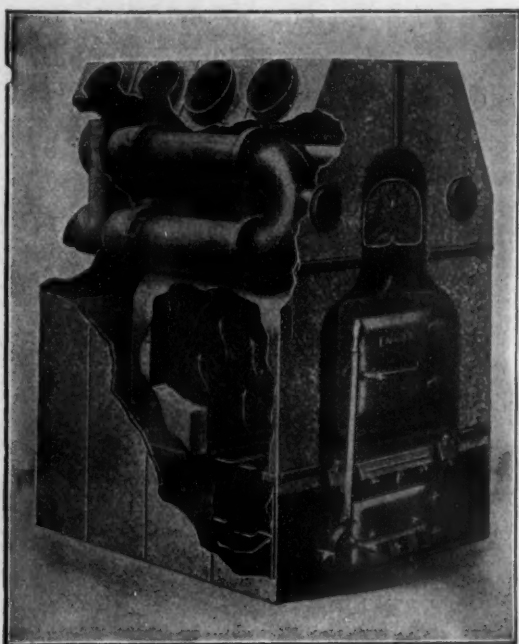
WM. G. WILLARD Room No. 28 Willard Bldg. St. Louis, Mo.
(316 Chestnut Street)



1912

==== We Wish You All ====

A Happy New Year



Made in either portable or brickset styles.

Does your heating system give perfect satisfaction?

Then you are using

MUNSON'S **Warm Air Furnace No. 140**

Munson's is the most up-to-date, sanitary and economical Heater to be found on the market.

It is constructed of specially selected soft steel, which has been demonstrated to be the best material obtainable for the construction of furnaces to eliminate many of the defects found in other makes.

The Fire chamber is made of extra Fire Box Steel, which is non-porous, the same as that used in locomotives.

The large, compound radiator instead of forcing the draft down as in most furnaces, in this one forces it up, *the natural way*, which insures an extraordinary long fire travel and perfect combustion of all smoke and gases.

Send for our new Booklet on this furnace.

MUNSON HEATER CO., - - Connellsville, Pa.

May you enjoy not only one, but

Many Happy and Prosperous Years

1912

— 1912 —

THE

Season's Greetings

To All Our Friends

“Home Comfort” Hot Blast Furnace

The comparative cheapness of soft coal and the ease and quickness with which it responds are elements which commend it as a fuel.

There are serious objections, however, to its use as generally applied in hot air furnaces.

Ordinarily no special provisions are made for proper combustion and the saving desired is about offset by the labor of handling and the disastrous effect of smoke and soot upon the house furnishings.

To attain the highest degree of efficiency with soft coal, the furnace should be especially equipped and where this is accomplished, it becomes a really ideal fuel.

The “HOME COMFORT” Furnace with Hot Blast Attachment is the most successful soft coal heater.



It consumes Soot, Smoke and Gas; the heated air discharged directly above the fire causes almost perfect combustion, converting into fuel that which would otherwise escape through the chimney as absolute waste.

Our method permits the use of slack or mine run, which is perhaps the cheapest fuel and will accomplish a saving of from 30 to 50 per cent on cost of operation.

“HOME COMFORT” is the registered trade mark of a **Guarantee of Quality**. Our furnaces are built to last—note the heavy doors, pouches, etc., and the size and closeness of rivets.

The seams are pressed together and rivets set under tremendous pressure, practically welded.

Our Complete Catalogues, Circulars and prices will be mailed to you on Request. Write At Once.

Wrought Iron Range Company, - St. Louis, Mo.

**May You Enjoy the
Brightest and Best of
NEW YEARS**

— 1912 —

THE BOYNTON FURNACE CO.

1849

1912

For the sixty-third time wish to extend our congratulations and cordially thank the Trade for their kind favors in the past and to assure them of our deep appreciation of their generous patronage.

It is our constant endeavor to manufacture an up-to-date line of Furnaces and Heaters embodying the latest and best ideas in furnace, Steam and Hot Water Constructions. Our Square Pot Line of Furnaces and Boilers is becoming more popular every day.



We will do our utmost to be worthy of a continuance of your patronage during the coming year.

**BOYNTON
FURNACE CO.**

CHICAGO

NEW YORK

JERSEY CITY



We make a specialty of registers, tin pipe and fittings, dampers, asbestos paper—in fact "everything for the heating job."



Our special follow-up system is offered to our customers without charge, to assist them in closing prospective jobs. It has been of great benefit to many of our dealers.



SUPERIOR FURNACES

ALL THAT THE NAME IMPLIES

SUPERIOR Furnaces have been on the market for over twenty-five years, and during all this time have represented the very best in furnace manufacture. For 1912 we will use our constant attention to maintain the high standard of the past, and by the aid of the most modern equipment will endeavor to supply our trade with furnaces of even higher standard than heretofore. **SUPERIOR** Furnaces are made in many sizes and of types to meet the various conditions existing throughout the country, and each variety is a leader in its particular class. During 1912 we shall continue our policy of working with our customers and assisting them in every possible way. If you are not numbered among our customers there is no better time than now to write us for catalogues and discounts and place yourself in position to secure your share of the heating business that 1912 will bring.

UTICA HEATER COMPANY

Main Office and Works, Utica, N. Y.

Chicago Office, 218-220 West Kinzie St.

One of our strongest features is prompt shipments. We carry a large stock—run our foundries continuously and are thus able to assure our customers very prompt deliveries at all seasons.



Our new Chicago Office and Warehouse at 218-220 West Kinzie Street, where our stock and facilities will be the best, will open January first. We shall be pleased to receive our customers and trade from Chicago and vicinity at this address.

Greetings to the Trade

**A HAPPY NEW YEAR
TO ALL**



THE HAMMOND UNDERFEED

*May
Peace and Plenty
Be the Portion
of Everyone
in the Trade
During All of 1912*

The Peck-Hammond Co., CINCINNATI, OHIO

When It Comes Right Down to
a Question of Heat

FRONT RANK STEEL FURNACES

Outrival Them All

The first **FRONT RANK STEEL FURNACE** was made in St. Louis in 1888. Today there are over 12,000 in use in St. Louis alone, and the fact that they are in the greatest demand, and bringing the most money of any furnaces in this market, after such a thorough test, proves all we claim for them.

The **FRONT RANK STEEL FURNACE** will burn any kind of fuel successfully. The radiators being very large, more than three times the capacity of the smoke pipe, will positively not choke up, even with the dirtiest soft coal and is the most economical in the furnace field today.

We want good agents everywhere to handle the **FRONT RANK STEEL FURNACE** and are offering splendid inducements to live dealers.

Write to-day for Catalogues and Terms.

HAYNES-LANGENBERG MANUFACTURING CO.
4045-4057 Forest Park Boulevard, ST. LOUIS, MO.



**GOOD BYE!
THE
"FRONT RANK'S"
TOO HOT
WE'RE GOIN' HOME!**

GREETINGS



THE year 1911 has been one of the most prosperous in our history and we are indeed grateful to our friends who helped in making it so. We cordially thank the trade for their many favors, and wish all a prosperous and

Happy New Year

THE HENRY & SCHEIBLE CO.
825-29 Long Ave. N. W. - 829-30 Champlain Ave. N. W.

Cleveland
Since 1852

To the Trade

1912

We Are Wishing You All A
**Happy and
Prosperous
New Year**

1912

The John Van Range Co.

Fifth and Broadway

CINCINNATI

OHIO

MAY THE NEW YEAR BRING YOU PROSPERITY

EUGENE MUNSELL & CO.

NEW YORK AND CHICAGO



*We Want to Bring This Home to You.
More Business and Bigger Profits
If You Sell*

Gilt-Edge Furnaces



No matter how "cheap" you figure some one will figure a little bit cheaper. Get out of this class.

The GILT EDGE has distinctive points of merit which attract the prospective buyer; features that he can easily see the value of. They really help sell themselves; and our dealers tell us they DO bring

MORE BUSINESS and BIGGER PROFITS

Does This Interest You? Then Write Us Now!

R. J. Schwab & Sons Co.

Clinton, Park and Reed Streets,

Milwaukee, Wis.



Warmth That Never Fails

You can just as well have an even uniform temperature throughout your home if you give the proper attention to the selection of your heating system.

WISE FURNACES

are a safe basis on which to establish any heating plant. Try one and see.

WISE FURNACE CO.,

AKRON, OHIO



XXth CENTURY FURNACES

Give your customers maximum heat value for coal consumed. You think it easier said than done, but there is a way and that way is coincident with the selling of these furnaces. They

ARE IN A CLASS BY THEMSELVES

when it comes to the most practical, durable and economical furnaces. The XXth CENTURY FURNACES embody the most perfect system of properly co-mixing the fuel and oxygen ever devised. Hence these furnaces are practically indestructible.

Our Complete Catalogue sent on Request.

XXth CENTURY HEATING & VENTILATING CO.
AKRON, OHIO

BEST WISHES FOR

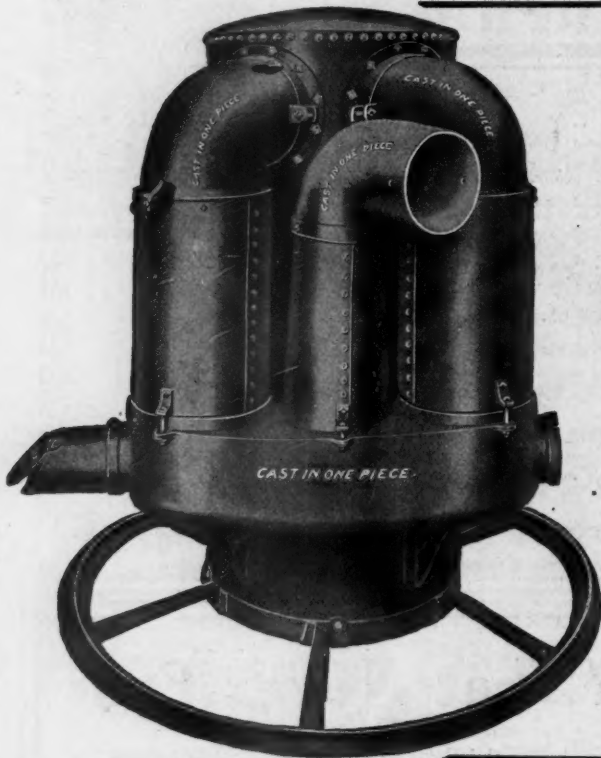
A Happy and Prosperous New Year

To our Friends who have favored us so generously in the past and to Those we hope to know in the future.

Kellogg-Mackay CompanyHEATING AND PLUMBING SUPPLIES
CHICAGO

Minneapolis

Seattle

**A REAR VIEW**

This illustration shows a rear view of the
AMERICAN FURNACE

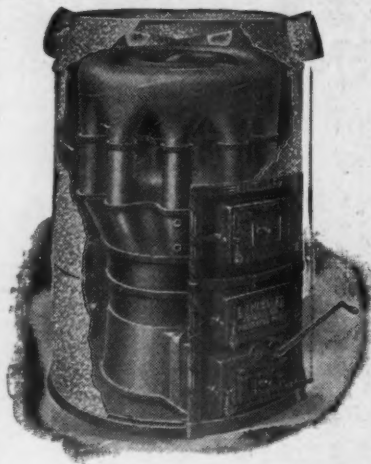
Note carefully the round radiator elbow style. See the one-piece castings and the Keystone packed joint where the steel radiator joins the cast elbow. Also note the male and female joint where the elbow joins the radiator collar. This will give you an idea of the rapidity with which this furnace can be erected.

AMERICAN FURNACES are made in the most modern equipped factory in the country for making steel furnaces. The riveting—and our furnaces are riveted just like a boiler—is done by powerful riveting machines which set the rivets by pressure. Its other parts are constructed in the same improved manner, with the result that—**We Guarantee Every Furnace We Manufacture.**

Write to-day for Catalog "B"

AMERICAN FURNACE CO.

1915 Pine Street : ST. LOUIS, MO.

**Do It For Your Own Sake**

You are in business for profit—you can't make even a small profit by selling goods similar in construction to those of your competitor. The lowest bidder gets these jobs.

For your financial gain and business reputation, get the exclusive agency of the "MUELLER" furnace.

WHY? Well, the construction of the "MUELLER" is so vastly different from other furnaces that it has no competition. Its scientific and practical construction puts it in a class of its own, far above all others.

The "MUELLER" has greater heating surface than any other heater (POSITIVELY GUARANTEED), also longer fire travel and greater efficiency.

It's the furnace people are buying every day—over 60,000 now in use.

L. J. MUELLER FURNACE CO.

191 Reed Street

Established 1857

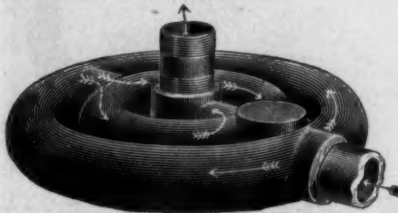
Milwaukee, Wis.

**KNOWN MERIT SWEEPS ALL BEFORE IT. IF YOUR
GOODS HAVE MERIT YOU SHOULD MAKE THEM KNOWN**

The Champion Combination Hot Water Boiler



One or more sections can be used together according to the amount of radiation to be used. The fire passing through spaces between rings in each section and over their large surfaces permits the direct action of the fire to come in contact with each section, making a powerful and effective heater. CHAMPION BOILERS are tested 100 pounds hydraulic pressure before leaving the factory and are guaranteed not to leak. Will increase every dealer's business who handles them. Prices, measurements, etc., upon application to



Frank D. Stolz Co.
Manufacturers
1210 Webster Ave. Chicago, Ill

1,000 Years

ago leisure moments were passed in the company of "wise fools" and Merry-Andrews. Now people read. By some people, leisure moments are moments of amusement. Other people find recreation in a small amount of study. The latter are the kind that have two horses for a one-horse buggy.



100 Tinner's Patterns

will help to buy the extra horse. Sent postpaid on receipt of \$1.00. Our descriptive circular tells why it's up to you.

DANIEL STERN
537 South Dearborn Street
CHICAGO

SMITH'S HERO

Ventilating Schoolroom Heater

The only heater that removes all the Foul Air.

The Ash Pit of Heater is not near the Floor of room; all danger from fire is removed.

Triangular Grate Bars without Cog Wheels or Bolts.

Admits Cold Air from Room when school is not in session.

The HERO HEATER is not a STOVE

To secure agency write the manufacturers.

CHAS. SMITH COMPANY

57 W. Lake Street CHICAGO, ILL.

WHERE "HIGH CLASS" IS SPECIFIED

Floral City KING

A reliable furnace from a reliable firm. Economy and service combined with skilled, workmanship, and material of quality, have gained a place for FLORAL CITY that easily distinguishes it from inferior makes. Burns hard coal, soft coal, coke or wood with equal success. Just the thing for dealers who want sold goods to reflect credit upon themselves.

Send for new King Booklet just issued.

The Monroe Foundry & Furnace Co., Monroe, Mich.

Remember this one fact—Anything of intrinsic merit can be successfully advertised.

FURNACE CASING RINGS

MADE OF STEEL

are manufactured for less money—are much neater in appearance—and are much *lighter* and *stronger* than the cumbersome and costly cast iron rings.



Use Them—They Will Save You Money

They are made to conform to individual requirements in every respect.

Made to Your Measurements

With Lugs—For Double Casings Full Circles—For Ordinary Use
Without Lugs—For Single Casings Partial Circles—For Full Cast Fronts

WRITE FOR PRICES

The Walworth Run Foundry Company

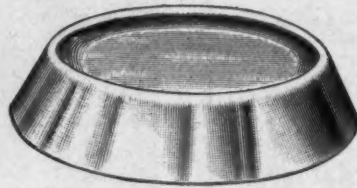
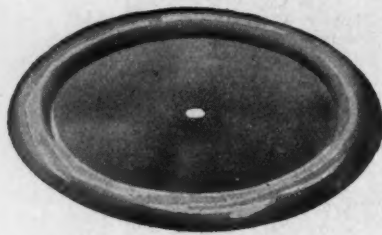
West 27th St., Filmore and Talcott Aves. and N. Y. C. & St. L. R. R.

Cleveland
Ohio City

Largest Gray Iron Foundries. Estimates Furnished for Castings. Manufacturers of Semi-Steel Registers.

FOOT RESTS

For RANGES, HEATING STOVES, GAS STOVES,
RADIATORS, Etc.



STAMPED STEEL,—Two Sizes.

Small, 2½" diam. inside rim.
3 " " outside rim.

Large, 2¾" diam. inside rim.
3½" " outside rim.

WOOD LINED,—One Size.

3" inside diameter at top.
4" outside diameter at bottom.

Finished in nickelplate or oxidized.

A Practical and Quick Selling article for All Stove Dealers.

Write for circulars and prices.
Write for free sample.

THE S. M. HOWES CO., MANUFACTURERS 40-46 Union Street **Boston**



*We extend to
All, our best
wishes for
a Happy
and Prosperous
New Year*



**Buffalo Co-operative
Stove Company
Buffalo, New York**



REPAIRS

FOR ALL MAKES OF

Stoves, Furnaces, Steam and Hot Water Heaters

LARGE STOCK OF WATER BACKS

Quick Shipments to any part of United States.
New ruling of Inter State Commerce Commission makes Express Rates over one or several Railroads economical way to ship Stove Repairs.

Furnace and Heating Department

For Western trade we have a perfectly equipped Engineering Department.
Plans and Correspondence Solicited for Warm Air Heating.
Excelsior and Douglas Cast Furnaces, Marvel and Wonder Steel Furnaces, Tuttle & Bailey Co. Registers; Excelsior Double and Single Fittings; Moore's Pure Air School, Church, and Store Heater. Write for Catalogues and Prices.

Omaha Stove Repair Works, 1205-1207 Douglas St., Omaha, Neb.

PEERLESS ENAMEL

GLOSS BLACK

for STOVE PIPES AND ALL IRON WORKS.

ALUMINUM

for RADIATORS, PIPES, ETC.

Handled By All Leading Jobbers, Samples Free On Request.

**NICKEL PLATE STOVE POLISH CO., Mfrs.
CHICAGO**

THE GEO. W. COPE STOVE PATTERN

COR. BRUSH AND WOOD-BRIDGE STS. DETROIT, MICHIGAN

PATTERNS

For Stoves and Heaters
The Cleveland Castings Pattern Co.

Cleveland
Ohio

You are Doubtless in Business for One Main Purpose
Rapid Turnover Results

Therefore when you are buying

Stove Repairs and Stove Dealers' Supplies

Don't forget to get them from

"BRAUER'S"

Our Price is Right, our Quality is Right and we assure you Prompt Delivery.

A. G. BRAUER SUPPLY COMPANY 316-318 N. Third St., St. Louis, Mo.

THE HARRINGTON AND KING PERFORATING CO.

PERFORATED METALS

OF EVERY DESCRIPTION AND FOR ALL PURPOSES

FOR SCREENS OF ALL KINDS

No. 610 NORTH UNION STREET, CHICAGO, ILL.
New York Office, 114 Liberty Street.

100 Tinnners' Patterns

Complete for \$1.00

Sent Postpaid on Receipt of Price.

DANIEL STERN, 537 South Dearborn Street, CHICAGO



1110-1112-1114 STATE ST. QUINCY, ILL.

PATTERNS

FOR STOVES AND HEATERS

First-Class in Wood and Iron

VEDDER PATTERN WORKS

Established 1835

TROY, N. Y.



QUINCY PATTERN CO.
IRON & WOOD
STOVE PATTERNS
QUINCY, ILL.

ELEVATORS

Improved, Quick and Easy
Rising, Steam, Electric
and Hand Power.

SEND FOR CIRCULAR

KIMBALL BROS. CO.

1031 Ninth St., COUNCIL BLUFFS, IOWA

Kansas City Office, 717 Commerce Bldg., Kansas City, Mo.

DUMB WAITERS and ELEVATORS

for all purposes

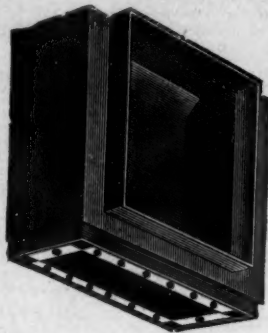
SEDGWICK MACHINE WORKS

131 LIBERTY STREET, NEW YORK.

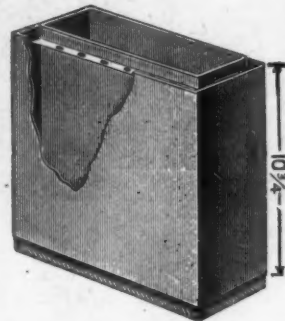
We Protect the Trade
Catalog on Request

MICHIGAN SAFETY FURNACE PIPE

The Only Sectional Furnace Pipe Made in Which the inner Walls Form the Cross Walls



NO WINGS TO PULL OUT
NO CLEATS TO BEND



This is the best fitting pipe on the market. It is easiest to set up, will not buckle, and is absolutely safe.

If you are not using our Nested Round Pipe, it's because you haven't seen it.

WRITE FOR CATALOG AND PRICES

The Michigan Safety Furnace Pipe Co.

Brooklyn and Abbott Streets, - DETROIT, MICH.



THE SANITARY ADJUSTABLE REGISTER HEAD

The accompanying illustration shows the only ADJUSTABLE REGISTER HEAD on the market. It is made of galvanized sheet metal, making it absolutely fire-proof and is constructed in a manner that anyone of ordinary mechanical ability can install it.

The SANITARY REGISTER HEAD is unlike any register head on the market, because it is sectional, thus being able to be adjusted to conform with various conditions that may be presented in construction of buildings. No screws or tools of any kind are required to remove or adjust this register head.

Write today for Special Offer we are making dealers, also for our complete Catalogues and Circulars.

WATERLOO REGISTER COMPANY,
WATERLOO, IOWA

CUT THIS OUT

The American Artisan and Hardware Record
Daniel Stern, Publisher and Proprietor
537 South Dearborn St., CHICAGO

Please send us THE AMERICAN ARTISAN each week for three months. At the end of that time we will remit Two Dollars for one year's subscription, or 50 cents in case we decide to discontinue.

NAME.....
ADDRESS.....
TOWN.....
STATE.....

Symonds Registers



No. 120 Operated by Hand or Foot

We carry in stock SIDE WALL REGISTERS to meet any requirement. All sizes and finishes. Prices Right. Prompt Shipments. Let us send you one for a sample. Each Register is equipped with our patented Simple Fastening Device.

We can show you testimonials where our Register has been the means of procuring many heating contracts. One customer writes: "Your Register has got us more than one job, we think it the finest on the market."

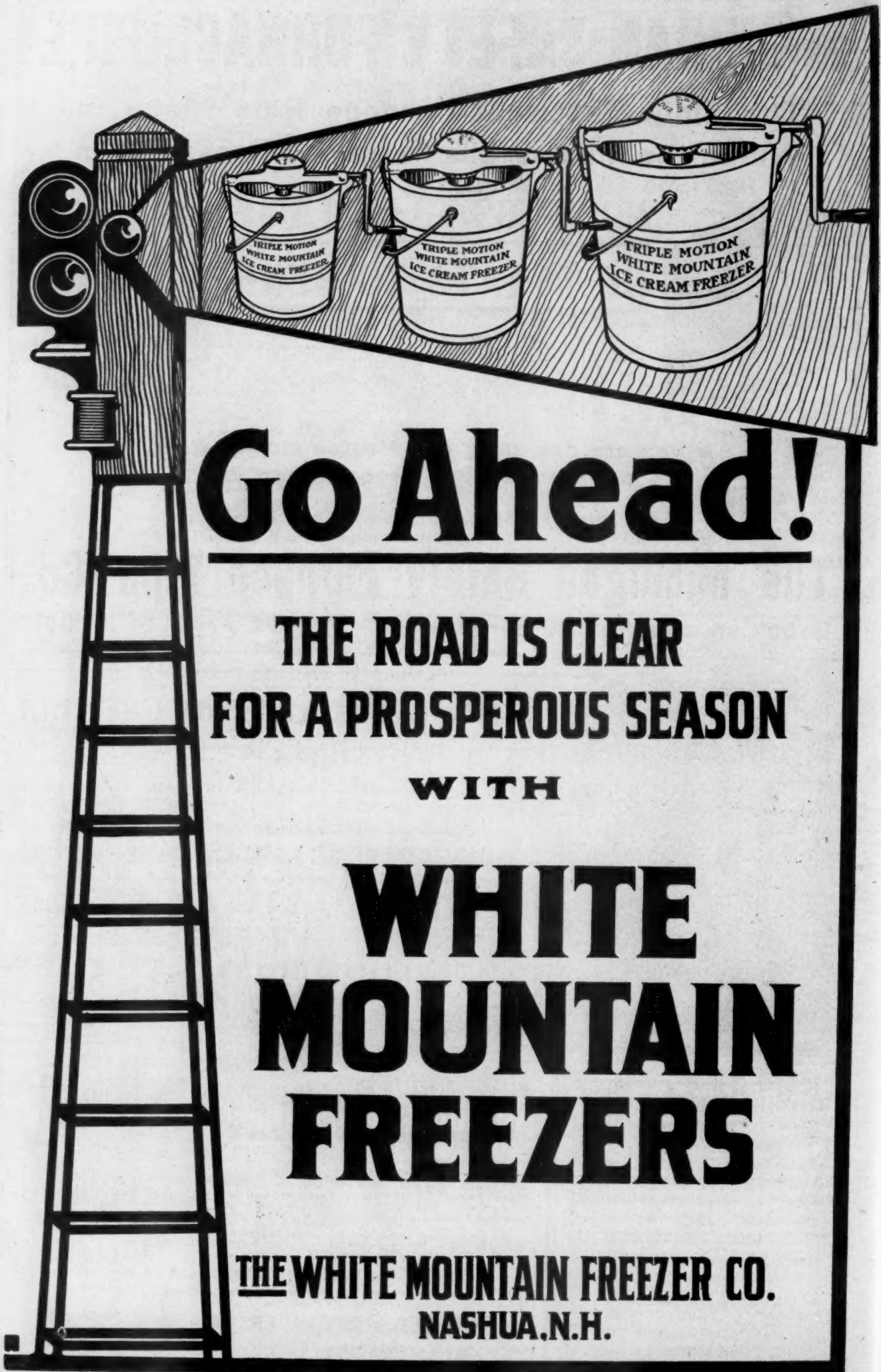
WHAT IT HAS DONE FOR OTHERS IT CAN DO FOR YOU

We receive perpetual orders from our many satisfied customers. Let us refer you to one. We manufacture exclusive Warm Air Registers.

SYMONDS REGISTER CO., 1102-1104 Madison St. ST. LOUIS, MO.

Carried in Stock by Jobbers Everywhere.

If Not, Write Us for Catalogue and Discounts.



Go Ahead!

**THE ROAD IS CLEAR
FOR A PROSPEROUS SEASON
WITH**

**WHITE
MOUNTAIN
FREEZERS**

**THE WHITE MOUNTAIN FREEZER CO.
NASHUA, N.H.**

ESTABLISHED 1880.



Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

PUBLISHED EVERY SATURDAY.

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS,
(Invariably in advance): ONE YEAR, POSTAGE PAID, \$2.00.
FOREIGN COUNTRIES, ONE YEAR, POSTAGE PAID, \$4.00.
CANADA, ONE YEAR, POSTAGE PAID, \$3.00.

Address all Letters, Communications, and Remittances to

DANIEL STERN, PUBLISHER AND PROPRIETOR,
537 SOUTH DEARBORN STREET, CHICAGO, ILL.

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CHICAGO, DECEMBER 30, 1911.

AMERICAN ARTISAN AND HARDWARE RECORD wishes its readers a Happy and Prosperous New Year.

OLD 1911 goes out with memories of none too favorable business but with a promise of better things for 1912. The past year has not been particularly satisfactory from a business standpoint. In fact, there have been times during the year when grave fears of a panic were expressed. But that is all past now; the horizon is clearing and the future looks promising. Unless the usual signs of prosperity fail, the coming year will be in marked contrast to 1911.

The improved conditions as the year draws to a close are reflected in the larger bank clearings and increased railroad earnings, the general advance in prices of iron, steel and copper, the increased activity in dry goods, the brisker demand for money and the fairly satisfactory crop situation as shown by the record-breaking cotton crop of upwards of 15,000,000 bales and firm grain markets.

Railroad earnings in the first week of December increased 6.4 per cent, and bank clearings gained 5.5 per cent in the entire country. The holiday retail trade has been quite satisfactory, considering the open weather. Merchants say that only seasonable winter weather was lacking to make holiday buying larger in volume. Evidently there has been little or no curtailment of the buying power of the people. Stocks in the hands of retailers in all lines are low and must be heavily replenished as soon as any considerable demand from buyers is manifested.

Dividend disbursements on the opening of the New Year will release an immense sum of money which will be available for reinvestment. It is estimated that dividend and interest disbursements in January will amount to more than \$232,000,000, which is a large increase over 1910, in spite of the recent setbacks to corporations.

In view of the fact that general business has not as yet had any stimulus from cold weather, it is remarkable that so good a volume of sales have been made and that collections are fair. With changed conditions in this respect in January, we may expect to see a continuance of the improvement already noticeable.

CASH discount is a question of figures. What is there in it? As the legislator inquired when asked to vote for a certain measure. At $1\frac{1}{2}$ per cent on monthly bills the discount is at the rate of 18 per cent a year on the purchases of each month. On a business representing purchases of \$100,000 a year the actual cash discount is \$1,500, but the rate per year represents 18 per cent. That is, if the merchant were to borrow \$8,333.33 at the beginning of each month at 6 per cent interest for one month and used that fund for the purpose of discounting his bills, he would save \$83.33, or 1 per cent on the amount, each month, a saving of \$1,000 a year. If he borrows that amount on the 15th of each month he will have until the 15th of the following month to make repayment, thus postponing final settlement thirty days.

The principle is the same whether the merchant borrows the money or uses his own. In either case, assuming that the money is worth in open market 6 per cent a year, the saving in discounting his bills represents a net profit to the merchant of 1 per cent.

The practical difficulty in attempting to carry out this plan lies in doing a credit business, or in buying stock in excess of one's capital. Where credits keep accumulating it becomes impossible to take advantage of the cash discount. That means that goods must be sold at a higher price under the credit system than if sold for cash, and the wise retailer will see to it that his prices are adjusted accordingly. In the case of a firm carrying \$20,000 in credits on its books the annual interest charge is \$1,200, or \$100 a month, and this amount must be added to the selling price of the goods sold during the month. If there is a still further loss of \$100 a month due to the inability of the firm to take advantage of cash discounts, then the loading will be \$200 a month, which on a monthly business of \$10,000 represents 2 per cent. In other words, an article that could be sold profitably at 98 cents for cash must be priced at \$1.00. In practice this means that the merchant must get full price from credit customers but that he may shade prices to cash buyers. There is no escape from this position if he would stay in business.

STATISTICS show that for every dollar's worth of merchandise imported from British territory into the United States, two dollars' worth of American products are exported to British possessions. The exact figures for For 1911. the first ten months of 1910 are 759 million dollars of exports and 383 million dollars imports. This does not indicate any falling off in the supremacy of the United States in foreign trade.

The growth of American commerce with countries and colonies under the British flag has been steady, and in the case of certain countries, notably Canada,

very rapid. In 1905 the 10 months' record of imports from British territory was 289 million, and in 1911, 383 million dollars, an increase of 94 million dollars. The 1911 figures are, however, slightly less than the total for 1910, when the 10 months' imports aggregated 405 million dollars. Exports to British territory for corresponding periods of the years named meantime grew from 583 million dollars in 1905 to 759 million in 1911, an increase of 176 million dollars. The share of the imports into the United States brought from British territory is about 30 per cent; while about 45 per cent of the exports goes thereto; and of the total foreign trade, approximately 40 per cent is with British territory. The term British territory here used includes England, Scotland, Ireland, Canada, Australia, New Zealand, India and other British East Indies, British Honduras, British Guiana, Aden, Gibraltar, the Falkland Islands, Hongkong, British Africa, Newfoundland and Labrador, the British West Indies, and other British islands. To all these, with unimportant exceptions, the exports from the United States are larger in 1911 than in 1910 or earlier years.

The foreign commerce of the United States with all nations in the year about to end will show an increase of over 200 million dollars when compared with the immediately preceding year, and a larger total than in any earlier year of our commerce. Imports, while falling below those of 1910 in the earlier months, have, in the closing period of the year shown a marked increase, indicating that the total for the year will differ but little from that of 1910, which made the highest record in the history of the import trade. Exports are larger than in any earlier year, and manufactures exported also make their highest record, reaching approximately 1 billion dollars in the calendar year 1911. The approximate total for the year, based upon 10 months' record already compiled, are: Exports, over 2 billion dollars; imports, 1½ billion dollars, of which over one-half entered free of duty.

GOOD resolutions ought to come with the beginning of a new year. It is the time to subscribe for and read

The Trade Paper and the Retailer.

the trade papers. When a merchant says that he has no time to read his trade paper he belittles his own ability. What is he doing that he has no time to inform himself on the topics of his trade? Is he sweeping out his store or wrapping up goods or dusting stock or cleaning off his sidewalk or doing any other of the thousand and one duties that ought to be entrusted to a five-dollar-a-week boy? If so, he is wasting time that might well be devoted to more productive work. He is probably the same merchant who does not advertise because he has no time to prepare the ads, or in whose space in the local paper will be found an advertisement of a refrigerator in winter or a heating stove in summer. The retailer who is the real brains of his establishment will delegate all small work to the employes and will devote his own time to management—which includes keeping abreast of the times by reading the trade papers.

Running a store by sitting at a desk may seem impracticable to the average retailer, and no doubt

it is, for him, but that is the way all great stores are managed. Giving to each employe some definite work and responsibility and holding him to it is far better than attempting to do the work for him. The proprietor should be the manager; he loses the respect of his employes in proportion as he loses his grip on the management of his business. On him devolves the "head work"; let others do the hand work so far as possible. If a merchant is not superior to his clerks in mental equipment and will power, by what right is he the proprietor? He may become the victim of unfavorable circumstances and lose his money, but if he has the ability to succeed he will rise to the top again; if, on the contrary, he has money without ability, a financial reverse will put him in a position from which he can never recover.

The merchant who subscribes to and reads the trade papers in his line will not lack for ideas, and will soon learn to drive his business and not let it drive him.

WHEN the agitator takes up cudgels against the middleman, meaning the jobber or retailer, as the case may be, he is attacking one of the most necessary factors in the business world. On the surface it would seem to some unthinking people that all wants

should be supplied "from maker to user," according to the favorite idea of certain manufacturers who sell direct; and because a few manufacturers have been successful in doing business along that line—estimated at less than 2 per cent of the sales made in any branch of manufacturing—the conclusion is jumped at that all business can be done in that way. This is about as reasonable as would be a proposition to carry all mail by aeroplane because a few letters have been so carried. The fact is that the established methods of doing business are based on very substantial business reasons and they cannot be changed.

The jobber, for example, is something more than a mere handler of goods; he also performs the very essential function of banker to the retailer. The jobber takes the product of the manufacturer and stores it in warehouses until such time as it is demanded by the retailer. The latter buys oftentimes "from hand to mouth," as it were, not having either the capital or the room to carry a large stock. He depends on the jobber to carry stock for him and to supply him on short notice with whatever he may need. If one jobber cannot do this he goes to another, but seldom direct to the manufacturer. At the same time the jobber may be called upon to carry the retailer on long time credit—an accommodation that rightfully belongs to the banker.

Similarly, the retailer is the source of supply and of credit for the individual buyer. Few families care to buy a large supply of any line of goods at one time. In the majority of instances they buy as they need, and the retailer, with his capital invested and his facilities for storage, is an absolute necessity to the life of any community. How many carpenters, not to say householders, buy nails by the keg? The convenience of the hardware store, for example, is

best appreciated in a new country where there are no hardware stores.

The "middleman" exists because he is needed, and he prospers in proportion as he makes himself indispensable in his community.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD.

There was a time when the merchant was a "trader" and was looked on with much the same degree of suspicion as the horse trader. That time has passed, thanks to the changed policy inaugurated by leaders in wholesale and retail merchandising. Marshall Field, whose name stands for integrity in the sale of merchandise of quality, is quoted as saying: "I made it a point that all goods should be exactly what they were represented to be. It was a rule of the house that an exact scrutiny of the quality of all goods purchased should be maintained, and that nothing was to induce the house to place upon the market any line of goods at a shade of variation from their real value. Every article sold must be regarded as warranted, and every purchaser must be enabled to feel secure."

This is the modern basis of merchandising—the golden rule basis, if you will, and the only foundation on which to build a permanent success.

* * *

The following clipped from a Southern paper:

A darkey was driving a load of stoves down the principal street, and had another darkey on back of wagon to keep the stoves from falling off; a sudden jar of the wagon caused the darkey on the back to lose his balance and a stove fell to the street; the driver stopped his team and walked to the back, looked disgustedly at the other fellow and said, "Dah now, niggah, youse done paid yourself off, right now."

* * *

Why do people flock to a land show? Is it not because there is in everybody a latent desire to get back to the soil? Old Mother Earth calls back her children. The farmer's life is the only real life; all else is artificial. The gauze and tinsel of the city charms for a time, but at last the heart turns to the woods and streams, the flowers and fields, with a longing that can never be appeased save by ownership of land or by close association with the soil. Every man is a farmer at heart; note the boy with his sand pile and his mud pies; only the demands of business have weaned him away from his first love. Henry Exall, president of the Texas Industrial Congress, says:

"When the farmer increases his net income without impairing his capital, he creates new wealth, swells bank deposits, puts more money into circulation and increases the demand for everything that is for sale. It is well to remember that everybody to a certain extent is a merchant, and that every man and every business is dependent upon and is interested in the success of every other man and every other business. No matter who or what you are, you can not alter this elementary fact. The newsboy with his papers, the man with the spade or pick, who has a day's labor for sale, the lawyer with his brief, the tradesman with

his wares, the newspaper with its space, the owner of a \$20 lot or a million-dollar building—all are not only interested in, but dependent upon the products of the soil. No other one occupation or business is so valuable to every other avocation as is profitable and successful farming, for it means better business and more money for you this year, and for all the years that are to come. Shall we in behalf of every business and for the uplift of all of the people press this campaign for agricultural education?"

* * *

There are two classes of salesmen in retail stores, representing the positive and the negative poles of the electric battery. The one attracts, while the other repels. The attractive salesman holds trade and draws trade, while the repellent salesman drives it away. Men of the latter class have no place in a store; they should be pounding stone or doing some other destructive work where tearing down and not building up is demanded.

Somebody has well said that no man in business intentionally antagonizes prospective customers who enter his store, but there are a whole lot of retail business firms who annually lose a large volume of business because the people who come in to purchase goods are, through poor salesmanship or inattention, unfavorably impressed and leave the store with the determination never to come back.

* * *

The president of a prominent life insurance company sends me the following:

"The public drinking cup cannot help but be one of the most prolific sources of disease and death. In the olden days disease was enshrouded in mystery, and regarded with a sort of superstitious awe. But this has all passed. Science has revealed the truth, and we now know that the remedy, or rather the prevention, of many of our troubles lies in the application of a little common sense to our everyday life.

"We wouldn't think of eating with an unwashed fork or spoon that had been used by a dozen other people, and yet, strange enough, we haven't hesitated to drink from a cup that has done duty for a thousand or more people of all grades and conditions of life.

"Tuberculosis kills one out of every eight people who die. The germs of this disease escape from the body only by way of the mouth. There are other diseases particularly infectious through the mouth. When you consider the possibilities, do you wonder that a movement has been started to abolish the public drinking cup?"

* * *

The salesman who "can talk politics without harm to his business" is a wise one. Perhaps a wiser salesman is he who never talks politics. The sale of goods and the preaching of party does not mix well. Better stick to the weather or the crops for a topic of side conversation. It is safer. Besides, the less said the better when a sale is at stake. Often the casual dropping of a remark that offends the buyer will change a customer into an enemy, whether from religious, political or social prejudice. The salesman must watch his tongue.

News Siftings

The Reinhardt Stove & Furnace Company has been incorporated at New Athens, Ill., to manufacture stoves and furnaces; capital stock, \$10,000. George S. Reinhardt, Henry Deichmann, Peter Haupt are the incorporators.

At the annual meeting of the Central Stove Manufacturers' Association, held in Columbus, Ohio, M. Hertenstein, of Columbus, was re-elected president; C. H. Miller of Cleveland, first vice-president; Harry Baldwin, of Pittsburgh, second vice-president; A. L. Williams, of Columbus, secretary, and E. W. Hake, of Cincinnati, treasurer.

Ringen Stove Co., division of the American Stove Co., have closed out their retail business at St. Louis, on account of their increased business in manufacturing and jobbing lines. They have disposed of their culinary and kitchen utensils and will job the products of the American Stove Co. and the Radiant Home stoves of the Germer Stove Co., of Erie, Pa., as usual. They have removed their headquarters at St. Louis to their former factory building at 825 Chouteau Avenue, where they have installed a magnificent commodious sample and salesroom and have provided their office staff with a convenient suite of offices. Thus passes out of existence one of the leading retail stove stores of the country, which was established in 1867 by Mr. John Ringen, and which has been continued by the corporation of the Ringen Stove Co. since 1884. They have disposed of their building at 410-12-14 N. 6th Street.

HOLIDAY GREETINGS.

A friend sends Christmas greetings from Cherbourg, France—a handsome card but no name attached.

F. E. Sorensen sends one of Tuck's "Lucky Cat" cards with best wishes for a Merry Christmas.

David Halstead and Joseph M. Hottel, of the Delta File Works, Philadelphia, send an engraved card extending a wish for "A Happy and Prosperous New Year."

The Charter Oak Stove and Range Co. sends "Cordial Greetings and Best Wishes," on a souvenir blotter with celluloid cover of very handsome design.

Charles E. Stewart, President of the James Stewart Manufacturing Co., Ltd., of Woodstock, Ont., sends a "Good Cheer" folder with a sprig of evergreen and a bow made from the Stewart plaid. It is a happy conceit.

G. P. Blackiston, the genial advertising manager for The Berger Manufacturing Co., of Canton, Ohio, writes: "I cannot permit the day to pass without wishing you the very happiest and dearest of Xmas."

George T. Bailey, assistant manager of sales of the Oliver Iron & Steel Co., of Pittsburgh, Pa., sends out a handsome folder with "Best Wishes for the New Year."

The Art Stove Co., of Detroit, Mich., send a large holiday card with the following sentiment by Henry Van Dyke: "I am thinking of you today because it is Christmas, and I wish you happiness. And tomor-

row because it will be the day after Christmas, I shall still wish you happiness, and so on clear through the year."

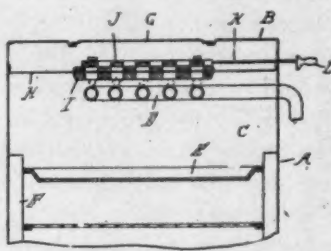
Sid Lowenberg, of the Lowenberg, Going Co., Portland, Oregon, sends a card: "Here's a handshake, a smile and a thought for your Merry Christmas—Put her there."

Samuel M. Nicholson, President of the Nicholson File Co., of Providence, R. I., sends a handsome wall card expressing best wishes for the New Year.

A NEWLY INVENTED GAS STOVE.

The A. B. Stove Co., of Battle Creek, Mich., has been made the assignee of United States Patent No.

1,012,054 granted to Frank K. Berry, of Battle Creek, Mich., on a gas stove which comprises a removable lid for the top, a horizontal partition arranged below and spaced a slight distance from



Newly Invented Gas Stove.

the top, having the portion directly beneath the removable lid apertured. There is a broiler chamber below the horizontal partition, a burner within the broiler chamber positioned in immediate proximity to and directly beneath the apertured portion of the partition. There are warming plates arranged upon opposite sides of the partition over the apertured portion and having the apertures registering with the apertures in the partition. A slide valve is mounted upon the warming plate above the partition for controlling the apertures in the latter and the warming plates, and there is a handle for operating the valve.

THE BORN STEEL RANGE CATALOGUE.

Under the title of "Kitchen Appliances," the Born Steel Range Co., of Cleveland, Ohio, have issued a magnificent catalogue of more than 160 pages, covering their entire line of ranges, ovens, urns, kitchen outfits, etc. It is difficult to do justice to a catalogue of this size in the scope of an ordinary reading notice. Every possible kitchen installation seems to have been pictured and described by this company in the new catalogue. Of course special attention is given to hotel, restaurant, hospital, club, camp, railroad and residence requirements, but aside from all that, this catalogue contains illustrations and descriptions of almost everything required in the kitchen, whether of the humble home or the mansion.

The Born Steel Plate French Ranges for hotels, restaurants, institutions, etc., are so well known that they need no detailed description in this connection. They are thoroughly set forth in this catalogue. Every detail is illustrated and described. The same is true of all the specialties of the Born Steel Range Co. This includes laundry stoves, broilers, pastry ovens, cake ovens, steam tables, carving and lunch tables, tea and coffee urns, steam cookers and all kinds of kitchen appliances. The catalogue is a veritable encyclopedia in this line. In writing for it please mention AMERICAN ARTISAN.

KINDS OF TRADE SCHOOLS NEEDED.

Arthur Williston, principal Wentworth Institute, Boston, in describing the value of evening trade and industrial schools before the National Society for the Promotion of Industrial Education in fifth annual convention at Cincinnati, O., said in part:

"No truer word has been written or spoken on the subject of industrial education during the past five or six years than the statement that *many different types of schools are needed to meet all the requirements*, and none needs more frequent reiteration. Social conditions in the United States are complex and American industry is tremendously varied. To properly aid, therefore, all types of boys and practical workers and to make them efficient for the great variety of callings that they are destined to enter, every available means should be utilized.

"At the outset it should be recognized that the evening school, coming as it must at the end of the day's work, puts a tax on the physical strength and vitality of the persons who attend it which only those who are rugged can stand. For this reason, evening schools cannot be an efficient or satisfactory way of training young apprentice boys who have not reached their maximum endurance or other persons who have not at least an average degree of ambition and vigor. Day trade schools or part-time schools are more suitable to teach trades to young boys or to beginners.

"Comparatively few boys who wish to learn a trade can sacrifice their earning power long enough to attend a full-time, day, trade school. Corporation schools where it is possible to establish them have many advantages, but only large corporations are likely to have a sufficient number of apprentice boys in any particular line to make it worth while to pay for systematic instruction. Half-time schools are also excellent, but the difficulties in the way of establishing them on a sufficiently comprehensive scale to provide for any large proportion of the young workers who need training are great. Day continuation schools, for which boys are excused by their employers for a limited number of hours per week, are more possible of general application than either of the other types of schools just mentioned, but only a small proportion of young men who are anxious to receive help can hope to have their work so arranged as to make it possible for them to attend. For the great majority of boys who are ambitious to forge ahead, therefore, the evening school is at the present time, and is likely to remain for many years to come, the only available aid.

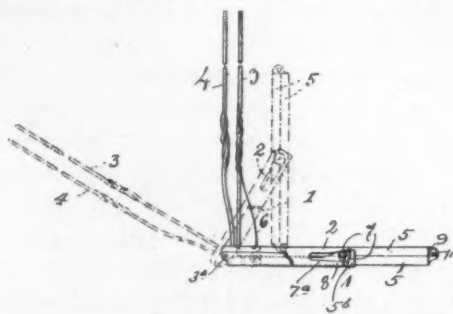
"The evening hours, after the day's work is done, is the only time which most young men may call their own. This time they may utilize for recreation or enjoyment, or they may utilize it for self-improvement and systematic study. In every city and town of considerable size there are many individuals whose ambition prompts them to use it in the latter way. And it is for the public interest just as much as it is for their own interest that generous opportunity should be provided for them to do so. It is the aim of the evening school to reach out a helping hand to this type of ambitious youth, who is anxious to ad-

vance in his chosen line faster than the rank and file, or who hopes to equip himself for some position of greater importance than that which he now holds.

"At the present time the total enrollment in the evening schools of America is many times greater, I am confident, than the enrollment of all other types of industrial schools combined, and also is increasing more rapidly than that of any of the other types of schools. This statement is a measure of their importance and of the good they have accomplished. And tens of thousands, yes, hundreds of thousands, of young men who have been aided by them are ready with grateful appreciation to give credit to the evening schools for a large part of their advancement."

ATTACHMENT FOR WAFFLE-IRONS AND FRYING-PANS.

United States Patent No. 1,010,059 has been granted to Fritz Wilhelm Ljung of Vasteras, Sweden, on



Attachment for Waffle Irons and Frying Pans.

an attachment for waffle irons and frying pans, which consists of the combination with a two-part waffle iron with each part provided with trunnion portions having pivot points, the pivot points of one part being disposed at one side of the pivot points of the other part, of an attachment therefor comprising means for engaging the trunnion portions of both parts of the iron to lift the same. There are means engaging the pivot points of one part of the iron to lift such part independently of the companion part of the iron.

THE PEAT BEDS OF THE UNITED STATES.

The results of an investigation that was undertaken to determine whether peat, a fuel widely used in some countries, could be serviceable in the United States, are contained in a bulletin, "The Uses of Peat for Fuel and Other Purposes," just published by the Federal Bureau of Mines. The author of the bulletin, Charles A. Davis, the peat expert of the bureau, gives an exhaustive review of the entire problem, both in this country and in Europe, and draws the conclusion that the peat beds of this country are a great and neglected resource, which, when properly and fully developed, will add to our national wealth no inconsiderable quantity of good fuel and of raw material for important arts and manufactures.

Mr. Davis estimates that there are more than 11,000 square miles of land in the United States having peat deposits of good quality. He declares that in these deposits there are 12,888,500,000 tons of peat with a value of more than thirty-eight billion dollars, enough peat to furnish heat and power for the entire country for many years.

PRICE MAINTENANCE.

Does the restriction of retail prices benefit or injure the public?

The right of the manufacturer to maintain a restricted price policy must, in the last analysis, depend upon the answer to that question. If such price restriction actually throttles competition, it is a bad thing. If, on the other hand, it encourages competition in quality and in service, it is a good thing.

There is more than one kind of commercial competition. There is competition in price, with its ever attendant danger of loss in quality. There is, where established, maintained and published prices prevail, a healthy competition in quality. The former is sometimes and the latter almost universally to the benefit of the ultimate consumer.

The manufacturer who restricts the prices at which his goods are to be retailed to a certain figure is just as much in competition with other manufacturers of similar goods as are those who do not restrict prices—but in a more healthful way. Bear in mind, however, that this discussion refers only to an individual concern or corporation—not to a combination between natural competitors to create an artificial price. That's another and quite foreign subject, though, unfortunately, likely to be confused by some people with the real question at issue.

The manufacturer who publishes a price-list on his goods allows a certain amount to the dealer in those goods and then insists on that dealer selling his goods at the list price, is by no means free from competition. If he sells wisely, he has familiarized himself with the average percentage that it costs the dealer to handle his goods, and he makes his discount large enough to pay the dealer a normal profit—a profit that will be satisfactory to him, but not big enough to prove a constant temptation to cut prices. In making his list price this wise manufacturer will put it at a figure that will pay him a normal profit, after giving a discount to the dealer that will likewise pay him his normal profit. Such manufacturer is as much in competition with other makers of goods as though he had no established price—but his consumer customers get a square deal: they all buy his goods at the same price.

The retailer must make a certain percentage of profit over and above the cost of doing business or go into bankruptcy. Isn't it manifestly fairer to the consumer if the dealer nets 5 per cent on what he sells to Smith and 5 per cent on what he sells to Brown than it is for him to lose 5 per cent on what he sells to Brown and make it up by netting 10 per cent on what he sells to Smith? And that's just what happens every day where retail prices are not restricted. Every retailer knows this, though the buying public does not. The restricted price plan is, in fact, particularly favorable to the small consumer, the man whom the courts are ostensibly trying to protect. It has been decreed that the railroads shall not discriminate against the small shipper by giving a lower rate, whether directly or by rebate, to the big shipper than the small shipper enjoys. Carried to its logical conclusion, the price restriction policy means the same thing. All retail purchasers are treated alike. It means the square deal.

And how is the manufacturer affected? He has a widely advertised article at, say, ten dollars. It is generally known that his goods are sold at list price only. The dealer is already receiving a normal discount. This manufacturer usually keeps ahead in improvements in his line, but, for the sake of argument, we will admit that a competitor announces an important and genuine improvement. What happens? One of three things: An improvement in the article in question to meet the competition, a cut in price in order to pick up the cheaper trade in this line, or, if the margin of profit will not admit this, an entire abandonment of the manufacture of such article. In cutting the price, if that method be followed, the price at which the goods are to be retailed may still be restricted at whatever lower level may be decided upon as a normal price at the new level forced by the competing improved product. Price restriction has in no way prevented a general lowering of price; it has simply maintained a uniform price.

A restricted price means that the goods are to be sold at a certain price, that the retailer is not to go either above or below that price; but if the established price is abnormally high for the quality of the goods, it cannot live. No mere restricting of price can annul the laws of supply and demand or of commercial competition. Indeed, goods that are sold at known prices offer themselves to the keenest competition because it is so easy for the manufacturers of competing articles to figure just what can and must be done.

The result is that the manufacturer of restricted price goods is alive to the fact that he must constantly back up his prices with quality. He is averse to changing his methods or permitting the retailers to change their methods of handling his goods, because he takes an honest pride in his one-price-to-all policy. The result is a constant effort to better his products, a constant effort to give his customers more for their money.—*Printers' Ink.*

ADVOCATES COOKING BY ELECTRICITY.

Dr. H. M. Hill, in an address before the St. Louis League of Electrical Interests, at the City Club, St. Louis, Mo., December 27, advocated the electric cooking of food. Dr. Hill, in a demonstration of how roasts and other meats are cooked, gave estimates to show cooking by electricity was cheaper than coal and was cleaner. "In electric stoves there is little shrinkage in meats," said Dr. Hill.

HAD TWENTY-FIVE ANSWERS.

TO AMERICAN ARTISAN:

You may discontinue our ad for Situation Wanted for the extra man we have. He has accepted one proposition out of some 25 answers and I think he is well placed, thanks to the assistance of AMERICAN ARTISAN.

W. S. GRIFFIN.

Letts, Iowa.

The genius is a man who thinks of something that immediately sets all other men to wondering why they hadn't thought of it themselves.

The Hardware Record.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 48 to 53 inclusive.

A. C. Fuge, Sr., a well-known Wisconsin hardware dealer, of West Bend, Wisc., is dead of pneumonia at the age of 76 years.

Peter O. Knight and W. C. Thomas have bought the interest of Capt. W. W. Carnes in the Temple Hardware Co., of Tampa, Florida, and are now in control of the company.

Herman Kaltenbach died recently at the home of his parents in Oak Park, Ill., of pneumonia. He was 37 years old and had been in the hardware business with his father and brother for several years.

John E. Barron, 56 years old, a leading hardware merchant of Canon City, Colo., was found dead in his office. Death was due to heart disease. Mr. Barron, according to his sister, went to the office about 7:30 o'clock at night to read the paper, and it is supposed, fell into a heavy sleep and died.

At the annual general meeting of the Metal and Hardware Association of the Board of Trade, of Montreal, Quebec, the following officers were elected for the ensuing year: President, H. J. Fuller; vice-president, Geo. J. Crowdy; treasurer, Alexander Gibb; directors, H. Walter Dorßen, W. J. Hayes, C. H. Godfrey, T. Esmond Peck.

The Gray & Dudley Hardware Company, of Nashville, Tenn., have announced the winners in their annual fisherman's contest for 1911. The first prize was awarded to Boyd Williams; second prize, J. S. Lewis; third prize, Geo. Blackwood; fourth prize, Duncan McKay. The prizes are awarded "for the largest black bass caught in any running stream of either Tennessee, Kentucky, Alabama, Georgia, Mississippi or Arkansas, same to be caught with tackle from Gray & Dudley's." The prizes consist of a Tennessee bass reel valued at \$12; second, a Bristol steel rod, cork handle, valued at \$5; third, a Bristol steel rod, maple handle, valued at \$4; fourth, a 50-yard Tennessee bass silk line valued at \$3; fifth, three dozen Tennessee bass hooks valued at \$1.80.

THE WINDOW DISPLAY MANUAL.

TO AMERICAN ARTISAN:

I am just in receipt of the AMERICAN ARTISAN and also the Window Display Manual. I find this little book to be the most interesting ever seen and read before along the window display line.

Again thanking you for all past favors and wishing you a Merry Christmas and a Prosperous New Year, I am

GEO. A. FLEISSNER.

Los Angeles, Calif.

If, as alleged, the main business of life is making money, it is amazing the number of people who fail at it.

BRIGHT PROSPECTS FOR THE NEW YEAR

TO AMERICAN ARTISAN:

At the close of the old and the beginning of a new year it may be truthfully said that prospects are bright



Wm. T. Gormley.

for a very satisfactory trade in 1912. This view is taken from the standpoint of the traveling salesman and the retail dealer who come in contact with actual conditions throughout the country districts. In conversation with both of these classes during recent weeks, I have learned that consumers in the West are

very hopeful, that they have the wherewith with which to buy and that they are planning for an active year. All our traveling men and the dealers generally with whom I have come in contact look for a brisk spring trade. Prospective building operations both in Chicago and within a radius of 200 miles or more in every direction are planned on a large scale. It is said that the farmers will build more extensively this spring than usually, and this activity is not confined to any one section.

The holiday trade, which at first promised to be light, turned out of very gratifying proportions. The buying came in strong during the last few days before Christmas and made the total volume of holiday business compare well with that of previous years. So far as I can learn, this was the general experience.

Prices in all lines are firm and the indications are that they will continue to advance. In fact advances in some lines are already assured and will be announced within a few days. Dealers generally have been holding off expecting lower prices and their stocks are much depleted but they are already beginning to take an unusual interest. On the principle that advancing prices always stimulate buying, it is reasonable to expect that after the first of the year a very general buying movement will set in that may result in still higher prices. Stocks throughout the country appear to be small and this buying movement must come sooner or later. The opening of the new year promises to mark the long expected change of policy of retailers in the matter of liberal buying.

Wm. T. Gormley

Chicago, Dec. 29, 1911.

THE HARDWARE BUSINESS IN 1911.

TO AMERICAN ARTISAN:

During this year the business in our territory has been fully up to our expectation. In fact, in many respects it has been better than we anticipated, especially when we stop to consider the many vital questions that have absorbed so much of our attention.

Taken as a whole the crops in our section have been quite satisfactory this year. Owing to the unusually long, dry spell last summer, which was followed by

excessive precipitation during the month of September, several crops were short, but with others the yield was somewhat above the average, so taken as a whole the proceeds from all crops were quite satisfactory.

The business in this section has been affected considerably by that feeling of uncertainty which has been prevalent all over the country for the past few years.

The outlook for 1912 in our territory is such that we anticipate a very fair volume of business during the first half of the year. After that it will depend largely on the yield of the crops. While it appears that the usual effect of a presidential year has been somewhat discounted, we believe that there will be, nevertheless, some feeling of uncertainty and hesitation which will retard business. Another influence that will affect business will be the attitude of the government toward Big Business, and against so-called "trusts" and "real" trusts.

In the labor world we expect to see a much more sane and conservative policy followed by the leaders. The confession made by those implicated in the dynamite outrages at Los Angeles and other places has had a most wholesome effect upon working men in general, by making them realize that they were being influenced by some unsafe and untrustworthy leaders. When labor unions are controlled by honest, fair men, the laboring men will make better progress, and will place themselves on a more permanent basis than they hitherto have been. The majority of the laboring men want only what is fair and right. Some unions have been most unfortunate in selecting dangerous men as leaders.

After recent developments it is quite likely that the conservative element among the laboring people will take a more active part in the selection of leaders than they have heretofore. When they do this, there will be fewer labor troubles and the working men as a class will fare better. It is unfortunate for the laboring men that they have allowed so many unworthy men to control some of their organizations; but the recent exposures will do much toward curbing the lawless element in the ranks of labor, and will encourage the better class to take control. When that is done, the laborer as well as the employer of labor will be benefited.

In the interest of the business of the entire country, we believe that the Government should declare its policy in unmistakable language with reference to large business corporations, and also against such combinations as are still working contrary to the Sherman anti-trust law. The way it has been, and is now, there is so much uncertainty that it is impossible to tell whether the courts would decide that certain acts are, or are not, within the law. This law should be so clearly defined that there can be no room for misunderstanding. Those who earnestly desire to conform to the law, are entitled to have it clearly defined by the Government. In many instances the department of justice has not done this, and when asked whether certain things were permitted under the Sherman anti-trust law, has replied that it was not permitted to interpret the law. This gives the business man who wants to comply with the law no protection because the Government says to him substantially: "Go ahead

and do whatever you think is not in violation of that law, but if, upon investigation, the court should decide that you have violated the law, you may be fined heavily and sent to prison." It is not right and just to place men who earnestly desire to conform to the law, in such an uncertain and dangerous position.

It is high time that we word our laws in such a way that each law can have but one meaning, and that it can be clearly understood without first having to submit a case to the various courts of the land, and spend years of time and enormous sums of money to find out what certain words mean. If we had more practical business men, and fewer lawyers in our lawmaking bodies, we should not have so many laws that the lawmakers themselves do not understand.

The recent advances made in prices of nails, wire, sheets and other iron and steel products, will have a helpful influence on business. They will cause many merchants as well as consumers to have confidence to make purchases for the early requirements of next year. The merchants and consumers have hesitated to buy in advance, because prices have been steadily declining and it was impossible to tell when bottom would be reached; but now that we have had a few advances, buyers will be inspired with more confidence. As we have already stated, if no unforeseen developments arise, we look for a very fair volume of business during the first half of 1912.

Rudolph Ferk.

Quincy, Ill., Dec. 28, 1911.

SOUTHERN BUSINESS DISAPPOINTING.

TO AMERICAN ARTISAN:

Business during the latter part of the year just drawing to a close has been more or less disappointing in this section of the South.

This part of the South in common with many other sections of it, is almost solely dependent on the cotton crop as a source of business. Certainly this is the money crop of the South and anything affecting cotton, affects all other business. While it is well known that Memphis has very large lumber interests, being the largest hardwood lumber market of the world, still the great bulk of her business has to do with cotton or its products.

The crop of cotton just harvested is acknowledged as the most expensive that has ever been planted. It was necessary, therefore, that the planter receive a good price for his cotton in order to break even, not to mention showing a profit. The high price of cotton that has prevailed for several years, and more particularly last season's price, had the effect of turning the head of the average farmer. He came to believe



John F. H. Barbee.

that cotton would never go as low as ten cents again, and in spite of governmental advice, he planted heavily the past spring, with the evident purpose in mind of "making a killing," to use a forceful slang expression of today.

The inevitable resulted. A fifteen million bale crop has been raised, and as a natural consequence the price has gone off decidedly. Not only that but grades below middling are finding hard sale. This is a condition unheard of in the cotton market. Cotton has always been the same as money, being easily convertible at any time.

To remedy the above conditions, politicians and others have advanced chimerical schemes for holding the crop and thus forcing the price up. It is remarkable the number of farmers who have followed this advice. One scheme advanced by a recent meeting of some certain Southern Governors was for the various cotton growing states to build warehouses where cotton could be stored, holding for higher prices. These honorable gentlemen, evidently more learned in the science of politics than practical business, seem to have overlooked the fact that if their warehouse scheme were carried out and the crop stored, this fact in itself would have a decided tendency to bear the market. Cornering a crop is not like controlling the output of mines. Only a few months need elapse until a new crop is thrown upon the market. Then what about your warehouse crop?

As far back as sacred history we have an account of such a warehouse scheme, with comment by the scribe on the schemer. The difference between that fool and the modern cotton holder is that he was going to have a royal, good time, eating, drinking and being merry, while the modern cotton holder has no opportunity to even thus satiate his animal appetites. He can't eat his cotton, unless he develops the characteristics of a Billy Goat, and he can't sell it and hold it, too.

The history of business in this section parallels the history of the cotton crop. You can readily see, therefore, what effect holding of cotton generally by the planter would have on business. The result could only be disappointing. This is particularly true, due to the fact that the fall of the year is the time when the most profitable goods are sold.

The system of furnishing farmers by merchants and others, which is peculiar to the South, is incorrect from the standpoint of economics. However, it was in this way only that the South could overcome the awful ravage of war carried on within her own borders. This system has continued to the present time. The system amounts to practically a gamble—certainly a long chance is taken. All tenants and a very large majority of the farmers are furnished from spring until cotton picking time. The merchant who thus furnishes puts his time and money up against the result of a cotton crop. If good prices prevail on cotton the merchant and all parties concerned usually make money.

The merchant then lays in a good fall stock of goods with the idea of corraling the surplus money circulation in his section. But when crop conditions or price is adverse, it then becomes more or less a

serious matter with the merchant. Collections are naturally slower and he is less disposed to put in large fall stock.

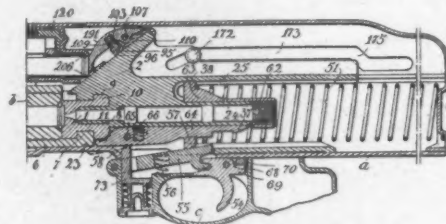
This, of course, also affects the jobber. With the large crop of cotton raised this past year and the low price, business has been slack. As most of the goods bought in the spring are necessary articles, we look to see a good volume of business this season, though possibly not as heavy as we would like. More economy will be practiced in buying.

Jno. F. N. Barber

Memphis, Tenn., Dec. 26, 1911.

RECENTLY PATENTED AUTOMATIC FIRE-ARM.

Nils Bjorgum of Asker, near Christiania, Norway, has been granted United States Patent No. 1,007,911 on an automatic firearm which comprises a recoiling barrel, means for arresting the same at a point in front of the cartridge feed-way, a breech bolt comprising a slider capable of a rectilinear motion only and a head thereon capable of a rotary motion. There are interlocking lugs on the head and barrel, a guide-lug on the head engaging a slot in the breech-casting, the slot



Automatic Firearm.

having a spiral front portion to impart a rotary movement to the head during the barrel recoil and a reverse rotary motion during the forward movement of the barrel, and a straight rear portion to prevent rotary motion.

THE PASSION PLAY OF OBERAMMERGAU.

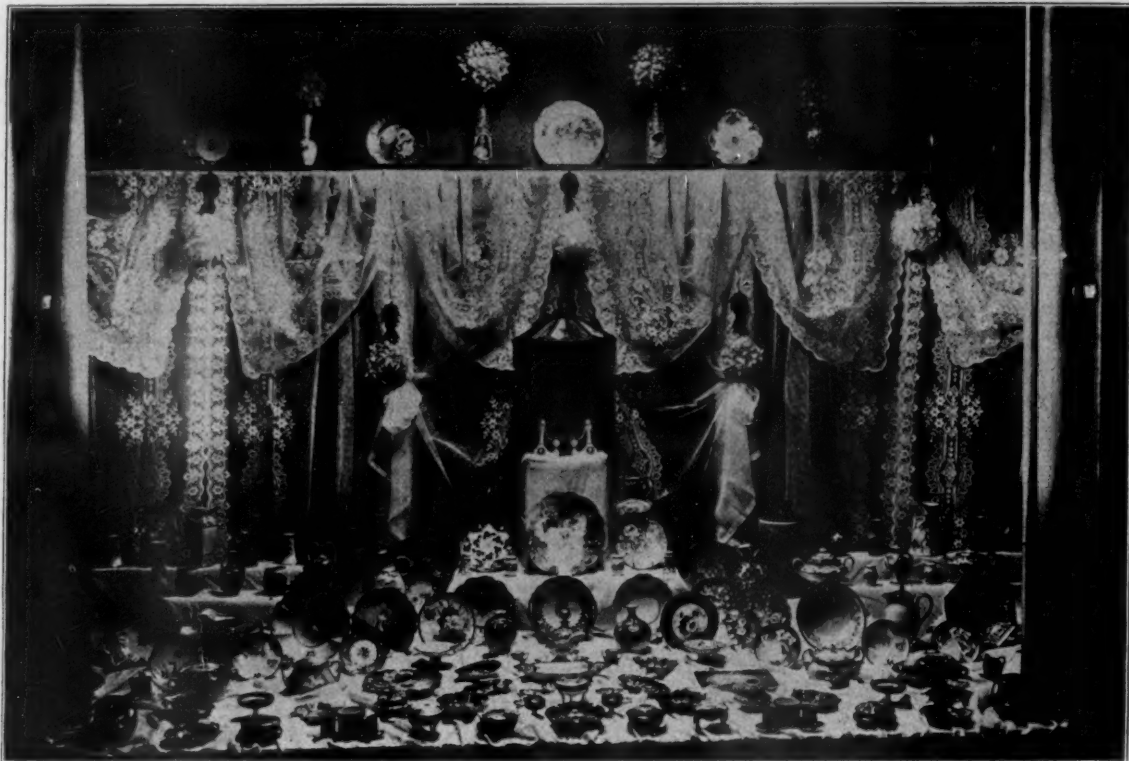
This title has been given to a very elaborately illustrated and beautifully printed book of about fifty pages on the Passion Play as seen by an enthusiastic admirer. The book is the work of James Paul Kelly, of the Kelly Axe & Tool Works, Charlestown, W. Va., who previously courted fame as the author of "Prince Izon." Mr. Kelly describes the play as he saw it, quotes the official text, and all in all gives the best resume of the Passion Play that we have ever seen. His description so closely fits the text, and the pictures so faithfully illustrate the whole that one gets a most excellent idea of the performance. It is entirely different from anything heretofore published on this play.

Mr. Kelly has given this sacred subject a most reverent as well as beautiful setting. His work will long be referred to as a true portraiture of the Passion Play of Oberammergau.

WINDOW DISPLAY OF HAND-PAINTED CHINA.

This window shows a display of hand-painted china. It was made by Charles J. Weix for the Eberhardt-Legro Hardware Co., of Antigo, Wis., and was one of the prettiest windows ever shown by this firm. The time was September, 1911, an appropriate time of year to sell china, and the window made many sales. The photograph was entered in AMERICAN ARTISAN Window Display Contest, and was awarded Honorable Mention.

The tone of the window throughout was white, the decorations being white, yellow and pink chrysanthemums. The background consisted of white pillars, draped with lace curtains. The upper part of the background was a platé rail, on which was shown plates and vases of flowers.



Window Display of Hand-Painted China Made by Charles J. Weix for the Eberhardt-Legro Hardware Co., of Antigo, Wis.—Received Honorable Mention in AMERICAN ARTISAN WINDOW DISPLAY CONTEST Which Closed October 1, 1911.

In the center of the window was a pedestal, at the top of which an electric lamp was shown. The bottom of the window was covered with white crepe paper, over which cheese cloth was draped to make a soft effect. On each side of the window, at different heights, were two glass shelves.

The display was entirely of hand-painted china of all descriptions. This was placed on the floor of the window, on the plate rail in the rear and on the shelves at the sides. The effect was very beautiful and attracted much attention.

The firm state that they have found good windows well worth while. Though they cost a trifle more than windows of ordinary attractiveness, they are appreciated very much more by the public, and more sales are made by having good windows.

The size of the window here shown was 6 feet deep by 16 feet wide.

NEW CATALOGUE OF CEMENT WORKERS' TOOLS.

One of the specialties of E. C. Stearns & Co., Syracuse, N. Y., is cement workers' tools. This line has been brought to great perfection by the company named and has been made the subject of a special catalogue recently issued. Every conceivable form, size and shape of tool for cement workers' use is illustrated in this new catalogue. Sizes and prices are given and the particular use to which each tool is adapted is described. In this connection one feature of the catalogue is a large double page illustration showing the concrete work around a modern residence, and the various tools adapted to this work. This original idea will be of great interest to every cement worker.

The cement workers' tools made by E. C. Stearns &

Co., are furnished by them in solid bronze or nickel-plated iron. The numbers from 100 to 200 indicate close-grained cast iron, finely polished and nickel-plated, while the numbers from 200 to 300 indicate special hard bronze highly polished. All handles are wax finished in the natural wood. The catalogue shows tampers and clamps as well as edging tools, jointers, etc., and in view of the fact that cement work now plays a most important part in building construction, this catalogue will find a welcome place in the trade library of every up-to-date hardware dealer. In writing for it please mention AMERICAN ARTISAN.

STOP MY ADVERTISEMENT.

To AMERICAN ARTISAN:

Please stop my ad. for salesman. I have more applications than I need.
JNO. D. GREEN.
Albany, N. Y.

SECRETARIES OF RETAIL HARDWARE ASSOCIATIONS—DATES AND PLACES OF 1912 CONVENTIONS.

Idaho.—Henry M. Hand, Boise; January 11, 12, 13, 1912, at Boise.

Kansas.—Western Implement and Vehicle Dealers' Association; H. J. Hodge, Abilene, Kansas; January 16, 17, 18, 1912, at Kansas City, Missouri.

Washington.—Pacific Northwest Hardware and Implement Association; E. E. Lucas, Spokane, Washington; January 17, 18, 19, 1912, at Spokane.

Oregon.—H. J. Altnow, Portland; January 23, 24, 25, 26, 1912, at Portland.

Indiana.—M. L. Corey, Argos; January 30, 31, February 1, 2, 1912, at Indianapolis.

Missouri.—F. X. Becherer, St. Louis; February 6, 7, 8, 9, 1912, at St. Louis; will not hold an exhibit.

Pennsylvania.—W. P. Lewis, Huntingdon; February 6, 7, 8, 9, 1912, at Atlantic City.

Wisconsin.—P. J. Jacobs, Stevens Point; February 7, 8, 9, 1912, at Milwaukee.

West Virginia.—Leslie Hawker, Shinnston; February 13, 14, 15, 1912, at Huntington.

Texas.—Henry Marti, Dallas; February 13, 14, 15, 1912, at Dallas.

Kentucky.—J. M. Stone, Sturgis; February 13, 14, 15, 1912, at Louisville.

Nebraska.—J. Frank Barr, Lincoln; February 13, 14, 15, 16, 1912, at Lincoln.

Illinois.—Leon D. Nish, Elgin, Ill.; February 13, 14, 15, 16, 1912, at Chicago.

Colorado.—F. C. Moys, Boulder; February 19, 20, 21, 22, 1912, at Denver.

New England.—R. W. Richards, 176 Federal St., Boston; February 20, 21, 22, 1912, at Boston.

Michigan.—Arthur J. Scott, Marine City; February 20, 21, 22, 1912, at Grand Rapids.

North Dakota.—C. N. Barnes, Grand Forks; February 21, 22, 23, 1912, at Fargo.

Iowa.—A. R. Sale, Mason City; February 21, 22, 23, 1912, at Des Moines.

Ohio.—Frank A. Bare, Mansfield; February 27, 28, 29, 1912, at Cleveland.

Minnesota.—M. S. Mathews, Minneapolis, Minn.; February 27 to March 1, 1912, at St. Paul.

South Dakota.—H. E. Johnson, Redfield; March 5, 6, 7, 1912, at Sioux Falls.

New York.—J. B. Foley, Syracuse; March 5, 6, 7, 8, 1912, at Albany.

California.—L. R. Smith, Oakland; some time in March—no exhibition.

Arkansas.—Grover T. Owen, Little Rock; May 14, 15, 16, 1912, at Little Rock.

Mississippi.—John E. Sommers, Clarksdale; May 14, 15, 16, 1912, at Hattiesburg.

Georgia.—John L. Moore, Madison; some time in May.

Alabama.—L. G. Smith, Ensley; some time in May.

Carolinas.—T. W. Dixon, Charlotte, N. C.; June 11, 12, 13, 14, 1912, at Isle of Palms, S. C.

MISSOURI HARDWARE DEALERS' CONVENTION.

The Executive Committee of the Missouri Retail Hardware Dealers' Association held a meeting at the Southern Hotel, St. Louis, on Thursday, December 28th, attended to routine work, and perfected the arrangements for their annual convention, to be held in St. Louis, February 6th, 7th and 8th. Their headquarters will be at the Southern Hotel.

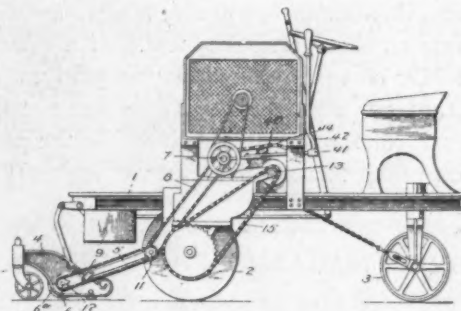
We are informed that the reports were most gratifying and that the Association has made substantial growth in membership during 1911.

PHILADELPHIA HARDWARE ASSOCIATION.

The regular monthly meeting and "New Year Celebration" of the Philadelphia Hardware Association will be held at the Fraternity Building, 1412 Arch Street, Wednesday evening, January 3, 1912. Following the business session C. W. Summerfield, Secretary Merchants' & Manufacturers' Association, will speak. Luncheon will be served.

A MOTOR LAWN MOWER.

William H. Coldwell, of Newburgh, New York, has been granted United States Patent No. 1,012,521 on a motor lawn mower provided with a motor, propelling mechanism and cutting mechanism, including a rotary cutter, the combination with the rotary cutter, of a friction drive therefor comprising a driving shaft, a fixed friction clutch member loosely mounted



Motor Lawn Mower.

on but held from longitudinal movement with respect to the shaft. There is a movable friction clutch member loose on the shaft, and movable longitudinally thereof, a spring surrounding the shaft and holding the clutch members in engagement with a predetermined pressure, a connection between the movable friction clutch member and the rotary cutter, and a separate clutch for throwing the cutter into and out of operation, having a fixed member loosely mounted on the shaft and rigidly secured to the fixed friction clutch member, and a movable member secured to the shaft to rotate therewith but movable longitudinally of the shaft, whereby the cutter can be thrown into and out of engagement without affecting the relation of the friction clutch members.

QUALIFICATIONS OF A GOOD SALESMAN.

If a man wants to make a permanent success he has to grow up with his line, writes J. Carstairs in the *Michigan Tradesman*. There are a few brilliant salesmen who have succeeded at different times with groceries, clothing and hardware, and who boast that there is "nothing in the world which they could not sell if they were thrown out in the territory and given a chance."

However successful such a man may be it is a certain conclusion that he would have been far more successful if he had stuck to any one of the different positions which he has filled and thus added to his special efficiency as a salesman—a more thorough knowledge of his line and his trade.

I would rather have a man in my sales force who

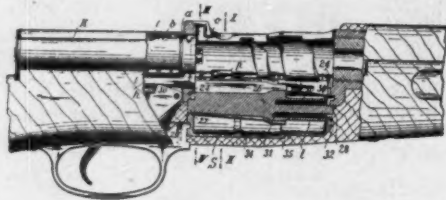
was a poor salesman and a good hardware man, than the most gifted salesman who had no knowledge, or only a superficial knowledge, of the hardware business.

Perhaps the poor salesman would hardly more than pay his expenses at the start, but he would at least avoid making costly mistakes. The gifted salesman, on the other hand, without a knowledge of the hardware business might send in a tremendous quantity of orders—but the profits would probably be all eaten up when his blunders had been rectified and his disgruntled customers appeased.

For this reason we do not receive salesmen from other lines, no matter what a capital showing they have made. Our men have all grown up in the house or in houses handling the same lines, and are thoroughly conversant with every item, except in one respect, and that is its cost price. We have found it inadvisable to inform salesmen as to the cost price of a product. Suppose some article brings a larger profit to the firm than another, and that a customer demands a low rate on that particular item. If a salesman is aware of the cost price he will be tempted under such circumstances to make a cut. If he does not know it he dare not cut for fear that it should be the particular article on which there is the least per cent of profit to the house.

DRUM MAGAZINE FOR FIREARMS.

Karl Krnka, of Hirtenberg, Austria-Hungary, has been granted United States Patent No. 1,008,162 on a drum magazine for firearms which comprises the combination with a receiver provided with an inclined feed slot cut away on one face to provide an in-



Drum Magazine for Firearms.

clined rest for the entire length of the cartridge, of a drum magazine connected to the receiver, a rotary cartridge feeder mounted in the drum, and automatic means for rotating the cartridge feeder, whereby the cartridges are fed seriatim to the feed slot.

THE RUSTING OF IRON.

The results of the recent experiments of Bertram Lambert and J. Campbell Thompson, of Oxford, on the rusting of iron are of some interest. They dealt with the purest materials procurable—iron, water, oxygen—and were conducted with vessels made of clear fused silica. The iron was obtained by reducing oxide (from ferric nitrate) in an electric furnace by means of electrolytic hydrogen. The pure materials did not rust when kept in contact for months, but the slightest impurity led to rusting, mostly within a few hours, even in the absence of all acid, including carbonic acid, the presence of which Moody had considered essential. Moody had also attempted to purify commercial iron, making use of platinum boats; that

iron would, according to the new experimenters, contain platinum and would rust quickly.

A NEW SAFETY RAZOR.

The Societe Generale de Coutellerie et Orfevrerie of Paris, France, has been assigned United States Patent No. 1,008,966 granted to Albert D. Grover of Malden, Mass., on a safety razor which comprises rigid blade capable of being tempered, a reversible guard co-operating with the blade and having its edge which co-operates with the cutting edge of the blade provided on opposite sides thereof with surfaces of different shapes to uncover different amounts of the cutting edge of the blade by reversal of the guard, and means to secure the blade and guard in fixed relation to either face of the guard.



Newly Patented Safety Razor.

TRAVELING SALESMEN FOR RETAILERS

Business men who want to succeed nowadays have to go after business, says *Hardware and Metal*. The old saying that all things come to him who waits seems to apply not at all. He who waits gets left, and that is about all he gets.

Every year dealers are becoming more and more energetic in going after business. This is shown in the methods being adopted by a number of hardware men to secure contractors' work. There was a time when the dealer was content to let the contractor come to him. But not now. The contractor is busy, and it is the man who goes to him who is likely to get the orders.

So retail dealers are introducing city travelers. That was left to the wholesale men, but it is left to them no longer. From a number of firms in the larger cities men go out daily, at this season of the year, to see the contractors, and to endeavor to secure orders for the glass and the inside fixtures which will be needed in the new house.

"We know a good many of the contractors," remarked one of the dealers when explaining this new way of getting after business. "We are able at the first of the season to arrange with some to do all their work, but others we have to see as each house is completed.

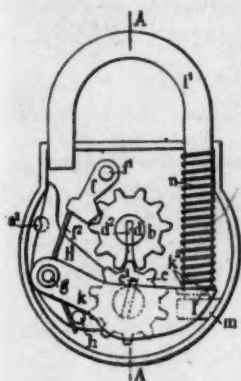
"Then there are a number of houses being erected by private individuals. Our men are always on the lookout for these. They find the man in charge of the work and secure an order from him if possible. But if this cannot be done, they go direct to the man for whom the house is being built."

These retail salesman use samples, though not as many as are carried by drummers for wholesale houses. They show the grades which they believe would be suitable for the house in question, and usually are able to give the contractor or the private builder a variety from which he is able to make a selection.

Anybody can cut prices, but it takes brains to make a better article.—Phillip D. Armour.

PERMUTATION PADLOCK OF RECENT INVENTION.

Eugene Maurice Octave of Descalles, Paris, France, has been granted United States Patent No.



Permutation Padlock.

1,006,366 on a permutation padlock and has assigned same to Alfred Bloch of Paris, France.

In this keyless permutation padlock is permutation mechanism comprising a number of rotatable members provided with recesses and a lever provided with steps adapted to co-act with the recesses. There is locking mechanism operatively associated with the rotatable members, and a locking lever controlled by the locking mechanism.

HARDWARE IN HONGKONG.

For many years, in fact from the beginning of foreign trade in China, the large importing houses with headquarters in Hongkong have controlled the trade in foreign hardware in China, although the bulk of the imports into Chinese ports have been in direct shipments from the various countries concerned, writes Consul General George E. Anderson from Hongkong, China. In the past five years, however, these firms have commenced to lose their hold upon this trade, and it is rapidly passing into other hands. Two elements appear to be influencing the trade to the greatest degree. One is the development of hardware manufacture in Japan and the other is the rise of more direct importations, particularly from Europe, through Russian territory, the trade being accredited in the Chinese returns to Russia, though as a matter of fact, it should be largely accredited to Europe generally, particularly Germany.

As to imports of hardware in Hongkong no definite figures are to be had, since this is a free port, but it is probable that the total imports will reach a value of about \$150,000 annually, of which about one-third is shipped to various Chinese ports. The goods imported into Hongkong are largely British and German, the former the higher grade goods and the latter the cheaper grades.

An inquiry for a screw driver or a pair of scissors at a retail hardware shop in Hongkong will generally lead the salesman to present two articles of either class, one of which he will offer as English and the other as German, the one high grade and the other as the cheaper grade, and often the higher grade goods will be American rather than British, but are offered as the latter, British goods being more generally known.

“When I say that every man, every business, every institution, must be advertised in some way that will over and over again remind the people, I am only voicing the actual experience of every man, every business, every institution, that has won lasting success.”—Chauncey Depew.

ANDREW CARNEGIE'S LIST OF GREAT MEN.

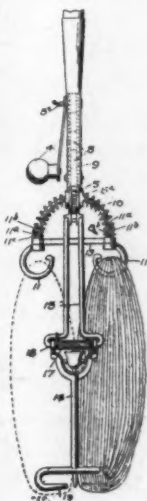
Andrew Carnegie, in a recent interview in New York, named the 21 men to whom he referred in his talk to the members of the Young Men's Bible Class of the Fifth Avenue Baptist Church the night before as the men who had moved the world and who had done things that improved the condition of mankind.

“I want to tell the young men of America,” said Mr. Carnegie, “that not one of these men was rich when he started on his career. Every one of them began as a manual laborer. Every one of them had to earn his own bread. Of these the greatest number are Scotchmen, and I am proud of them and also of the Americans in the list, and I am proud to think that Thomas A. Edison was a messenger boy along with me.”

His list follows:

- Arkwright, Sir Richard—Inventor of cotton spinning machine.
- Bell, Dr. Alexander Graham—Inventor of the telephone.
- Bessemer, Sir Henry—Inventor of the steel process that bears his name.
- Burns, Robert—The Scotch poet.
- Columbus, Christopher—The discoverer.
- Edison, Thomas Alva—The electrician.
- Franklin, Benjamin—The electrical pioneer.
- Gutenberg, Johannes—The inventor of the printing press.
- Hargreaves, James—Inventor of the carding machine and the spinning jenny.
- Jenner, Dr. Edward—Discoverer of small-pox vaccine.
- Kay, John—Inventor of the fly-shuttle and the card-making engine.
- Lincoln, Abraham—Abolished slavery.
- Morton, Dr. William Thomas Green—Discoverer of the anaesthetic properties of ether.
- Murdock, William—Perfected coal gas for illuminating purposes.
- Mushet, Robert—Inventions used in the manufacture of steel.
- Neilsen, James Beaumont—The inventor of the hot blast used in the manufacture of iron.
- Shakespeare, William—Playwright.
- Siemens, Sir William—Inventions used in the manufacture of steel.
- Stephenson, George—Founder of railways.
- Symington, William—Inventor of the steamboat.
- Watt, James—Development of the steam engine.

MOP AND WRINGER OF RECENT INVENTION



Mop and Wringer.

United States Patent No. 1,011,525, has been granted to Henry O. Thomas on a mop and wringer comprising a handle and a flexible shaft journaled between its ends transversely to the handle. There are cloth-engaging devices at the opposite ends of such flexible shaft, and means for rotating the flexible shaft, cloths connected at their upper ends with such engaging devices, and means for connecting the cloths together at their lower ends.

The design is that of a wringer which works by torsion. When the cloth is properly connected and the shaft is rotated the mop is twisted and the water squeezed out.

A RECENTLY PATENTED SAFETY RAZOR AND CORN KNIFE.

The Sanitary Safety Razor Co., a corporation of New York, has been made the assignee of United States Patent No. 1,012,428, granted to Fernando Perez, of Adra, Spain, on a safety razor and corn knife, which consists of four strips integrally united, forming a rectangular blade support, diametrically intersecting ribs integral with the strips, and a similarly shaped blade positioned on the support with the ribs superposed.



Safety Razor and Corn Knife.

RETAIL HARDWARE DOINGS.

NEW FIRMS AND CORPORATIONS.

Mott, N. D.—H. F. Beeman has purchased a \$12,000 stock of hardware and machinery and will occupy the J. B. Smith building and expects to commence business about January 15 or 20.

Villa Grove, Ill.—A. J. Beck and J. R. Arnold have opened a hardware store here.

Wooster, Ohio.—The Wooster Hardware Co. has been incorporated with a capital stock of \$75,000 by Robert A. Biehele, W. G. Christy, Harry A. Hoffstott.

Parker, Kans.—The C. A. Byers Hardware Co. has been organized to conduct a retail hardware business.

Newark, N. J.—Joseph Schenkel has put in a stock of shelf and heavy hardware, implements, etc., in conjunction with his present sheet metal, plumbing, etc., business.

Truesdale, Iowa.—A store will be opened here in the near future by George Tutt.

Litchfield, Ill.—The Schutt Hardware Co. has been incorporated with a capital stock of \$2,500. The incorporators are William A. Schutt, George Schutt and Josephine Schutt.

Deford, Mich.—A hardware store has been opened here recently by McGregor & Spencer.

BUSINESS CHANGES.

Marilla, N. Y.—Ernie Ewell has purchased the hardware and undertaking business of A. Beamis.

Manning, Iowa.—Frank Kemp recently sold his interest in the hardware store to John Rostermemdt, who takes possession January 1.

Reading, Pa.—The firm of Wagner & Dentzer, hardware dealers, 145 West Buttonwood St., has been changed to Dentzer & Co., Elias H. Wagner retiring. The new member of the firm is William F. Dentzer, Jr. The store has been established at its present location for nine years.

Chapman, Kans.—Waddick Bros. have disposed of their hardware store to E. J. Lorson.

Fisher, Ill.—B. L. Chapman has purchased the Greiser estate hardware store and will take possession the first of the year.

Natchez, Miss.—The firm of Schwartz & Stewart, the pioneer firm of Natchez, has been dissolved, W. P. Stewart having purchased the interest of Mrs. Anna F. Schwartz, it has been reported. The business will be conducted under the old firm name.

Casody, Kans.—J. W. Horton has sold his hardware stock to the Reed Hardware Co.

Canadian, Okla.—U. G. Crane recently purchased the stock of the Howell Hardware Co.

Wayside, Kans.—W. M. Bowersock recently disposed of his hardware stock to G. H. Edson.

Waterville, Kans.—Scott & Thomas have taken over the hardware business of Howard Custard.

La Monte, Mo.—Mr. Warrenbrock of Sedalia has acquired the hardware stock of J. P. Kemp.

Frankfort, Ky.—M. M. Allan of Elkhorn has taken over the hardware business of J. C. Mastin.

Oxford Junction, Iowa.—It is reported that Lloyd Fowler has sold his hardware business here and will take up other work.

Atkins, Iowa.—Henry Kraehling has acquired the hardware business of J. W. Stewart.

Hawkeye, Iowa.—Williamson Bros. have taken over the hardware business of Wilson G. Hurd.

Colfax, Ill.—J. L. Barnes has succeeded William O. Ward in the hardware business.

MISCELLANEOUS.

Teague, Tex.—The Goolsby-Lindsey Hardware Co. have filed proof of final payment of capital stock.

Grinnell, Iowa.—It has been reported that G. L. Miles, who has been in the hardware business for 25 years, will retire from active business life, at least in this locality. One reason for this move on his part is the lack of health of Mrs. Miles and the desire to give her the benefit of the climate of southern California.

Spencerville, Ind.—The hardware store of Bowser & Gloyd was severely damaged by fire recently.

Danville, Va.—Fire caused a loss to the Virginia Hardware & Mfg. Co.

Madison, Wis.—An addition is being built to the hardware store of Wolff, Kubly & Hirsig, which will double their floor space. They will also put in a new line of store fixtures.

West Salem, Wis.—The fixtures for the new hardware store of Miller & Drecktrah have arrived and have been installed. They expect to move into their new building this week, where they will have one of the nicest, up-to-date hardware stores in their section of the state.

OBITUARY.

George Vanardale Redeker.

George V. Redeker died at his home in Kenosha, Wis., December 23, 1911, after a long illness. He was 66 years old and a native of Waldon, Orange County, New York. He was a son of the late John S. Redeker. At the age of 16 years he enlisted in the union army as a member of Company M of the Fifteenth New York Artillery. He served to the close of the war and was honorably discharged. During his military service Mr. Redeker was connected with the Army of the Potomac and he took part in some of the heaviest fighting of the entire conflict. The New York Artillery was especially prominent in the fighting at the Battle of the Wilderness.

After the close of the war Mr. Redeker came to Kenosha and he gained his first business experience in the Dewey and Rush hardware store. His work in the store attracted the attention of Hibbard, Spencer & Bartlett Co., of Chicago, and he left Kenosha to go on the road as a traveling salesman for that company. He remained in this capacity for thirteen years and during this time became widely known as a salesman. During the time he was employed by the Chicago company Mr. Redeker made his home at Fond du Lac, Wis. When he severed his relations with this company he returned to Kenosha, Wis., and went into the retail business in partnership with John J. English and he continued these relations until ten years ago, when he retired from active business life.

Mr. Redeker was married to Miss Harriet E. Brown, at Newport, Illinois, on Feb. 11, 1874, and his widow, one son, Harry E. Redeker, of Aberdeen, Wash., and one daughter, Mrs. George R. Sutherland, of Kenosha, survive him.

Advertising Department

Our readers are invited to send in copies of their advertisements in the local press for criticism. All Communications should be addressed to the "Advertising Department" of THE AMERICAN ARTISAN.

This advertisement is a good example of how not to make a Christmas announcement. Running everything into one paragraph is not conducive to good ad-

CHRISTMAS SUGGESTIONS

FROM A STORE FULL OF USEFUL PRESENTS

The Gulder Sled, the sled all children want, 98c up; Mechanical and Electrical Toys, all prices and all guaranteed. Children's Knife, Fork and Spoon sets, 10c to \$3.50. Air Rifles, Pocket Knives, 10c to \$2.50, endless variety. Table Knives and Forks, Tea and Table Spoons, Rogers' Silverware, 12 year guarantee; Rogers' Nickel Silverware, 5 year guarantee; Scissors and Shears of endless varieties. Eastman Kodaks and Supplies; Guns and Rifles, Mouth Organs, 5c to \$1.00; Toy Ranges, 50c to \$2.00; Clothes Wringers, Washing Machines, Ironing Boards, Wash Boards. Everything in cooking utensils, all kinds of Food Choppers, Gillette, Everready, Gem Junior, King Safety Razors, Razor Straps, Lather Brushes, Shaving Soap, all prices. Skates of all kinds at all prices. Tea Kettles, all kinds. How about a new Range or Heater, when the price is low? Indeed you will save money and find a useful present for all in my large and wide variety of stock.

Bring the children to see our Xmas window. Wishing you all a Merry Xmas

R. P. Raymond's Hardware

The Red Front Store,

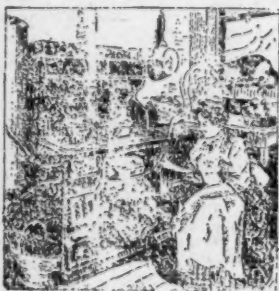
Middletown, Pa.

vertising. Crowding a small space with many items and using small type with little or no variation from the ordinary is poor publicity. Better a larger ad or less matter well displayed.

* * *

This advertisement of the Locker-Bettner Co. appeared in the Newcastle (Ind.) Daily Courier of November 25, 1911. The advertiser took advantage of the fact that Thanksgiving Day was near at hand to advertise a range. At such a time the kitchen range is uppermost in the mind of every good housewife, and the idea of coupling Thanksgiving with the sale of ranges is a good one. The same might be said of

Thanksgiving Sale



RANGES

\$40.00, fine, smooth nickel, now at \$30.00. A Great Bargain.

Also Special Prices in Base Burners and Soft Coal. Large size \$9.00.

See us today for bargains. Easy terms.

Locker-Bettner Co.

Maxim Building, South Side Court House.

Christmas and the holidays. Aside from this, the advertisement was not particularly striking. As it appeared in the paper it was about 4 inches square, a space hardly large enough for effective display of a stove and description. The advertisement should have been larger and the display more prominent. The

idea worth noting in this connection is that every anniversary or holiday affords opportunity for a special display advertisement, but that sufficient space should be used to permit of a good display.

* * *

This "yellow kid" ad of the Balkcom Hardware Co. appeared in the Macon, (Ga.) Telegraph of October 1. It is an attempt to counteract catalogue house competition and in a general way presents a very good argument, but we cannot help thinking that the space used could have been utilized to better advantage than by using a stock cut and a stock ad. There is no local advertising that can beat a straight talk from the

**NO SIR! — NO MORE
MAIL ORDER GOODS
FOR ME. I HAVE
BEEN STUNG**

*I want to
see what
I buy-*



**THE HOME
STORE
FOR ME**

A MAN OUGHT NOT TO BE SHOT OR PUT IN AN ASYLUM JUST BECAUSE HE ORDERS GOODS AWAY FROM HOME FROM A CATALOGUE HOUSE.

HE ONLY NEEDS TO BE TAUGHT THAT HE CAN BUY BETTER AND CHEAPER AT HOME.

THEN THERE'S NO FREIGHT TO PAY; HE CAN SEE WHAT HE BUYS BEFORE HE PAYS OUT HIS MONEY; HE IS SURE OF GETTING RELIABLE, KNOWN BRANDS OF GOODS.

AND WE ARE HERE 365 DAYS A YEAR TO MAKE GOOD ON WHAT WE SAY AND SELL.

BALKCOM HARDWARE CO.

shoulder by the local advertiser himself who knows what he wants to say and says it in a convincing and business-like way. If a local advertiser has a certain appropriation to make for advertising in his town paper he should give the matter his personal attention or employ some one to do it for him in his own store if possible, rather than to use stock illustrations and "canned" reading matter. He will find the results much better the nearer he gets to handling the matter himself.

* * *

ADVERTISE.

O merchant, in thine hour of e e e,
If on this paper you should c c c,
Take my advice and now get y y y,
Go straight ahead and advert i i i,
You'll find the stunt the best to u u u,
And one neglect cannot ex-q q q,
A silent business soon de-k k k,
Don't stick with these old-fashioned j-j-j.

—Cleveland Leader.

Heating and Ventilating

ANOTHER REPLY TO "A CRANK."

TO AMERICAN ARTISAN:

I wish to rise to a point of order. In your issue of Dec. 9th, a Mr. "A Crank" finds it incumbent upon himself to throw the harpoon into Ed Heenev, of Severance, Kan. I did not see the "Problem" referred to in your issue of Nov. 18th, but judging from Mr. "A Crank's" effort I am willing to make the customary gamble of a Kentuckian—a pickled nigger—(the proceeds to go to any charitable institution) here or hereafter, that Mr. Heenev has a job of school house heating on hand that will require warm water to make it what my friend Teddy would designate "a howling success." I am also willing to venture the opinion that Mr. Heenev is not a competent heating man, and also that he has been guided by the published rating that was furnished him by the company, whose furnace he installed. I also am forced to disagree with Mr. Crank in regard to the chimney setting fire to the woodwork. It was, in fact, fortunate that it occurred while the janitor was warmed up to the work, as he was doubtless in better form to make a sylph-like glide to the pump and return with a bucket of water than though he had been out to a Kensington party or "snark" of some other character, and all humped up like a burnt-boot from inaction. Mr. Crank takes occasion to state that the furnace in question is "a good heater," which places him clearly within his rights, provided AMERICAN ARTISAN encompasses the regulation rates for advertising. My experience has been that all furnaces are good heaters, some better than others, but all good heaters. (Hope I will not be required to apologize for this statement.) I gather from Mr. Crank that the furnace in evidence has a "total area of heat outlet of 1,083 sq. inches, and that it will carry the same without forcing" if the cold air supply is adequate. I am inclined to associate this statement very intimately with the fertilization in vogue when I was a boy on a Minnesota farm many years ago. The fact is that Mr. Heenev has too much space connected to the furnace for one furnace to handle in cold weather. It would be about right for two furnaces the size less. Mr. Crank's talk relative to the surprising inefficiency and inaptitude of the party responsible for the arrangement of the job in question is undoubtedly O. K. Personally I have been looking for something of some particular value to emanate from the Federal Furnace League, something that would be of at least a little help to the inexperienced in furnace setting. I trust that we may receive it soon, as indicated by Mr. Crank. I would gladly give him another turn and take up his article in detail, but think that this is probably longer than it will be interesting to you, and besides, it is ten o'clock and my pipe has gone out.

GEO. E. WILTSIE.

Lincoln, Neb.

Before you kick the other fellow for not bringing home the borrowed maul, go down to the barn and see if his borrowed ax stands behind the door.

STEALING OTHERS' IDEAS.

TO AMERICAN ARTISAN:

We note with a great deal of interest your comment on what you consider an injustice, entitled "Editorial Courtesy and Strict Honesty in the Matter of Quotations," etc., on page 16, of the December 9th issue of AMERICAN ARTISAN AND HARDWARE RECORD. Mr. Editor, you are not the only person that has originated something and had it confiscated, by any means. Some people make their living principally by stealing. Some will steal your ideas, some will steal your bread and meat, some will steal your money, some will steal your good name. There are yet many honest, well thinking people, in fact, they are in the majority, that know where honor is due, and will always give credit where credit is due. We can not kill persons that have no originality; they prosper for a time by stealing others' ideas, but in the end they pay the penalty, and right will eventually prevail. There is always someone to be found that is ready and willing to purchase stolen goods; anything that is stolen and used by those who have not the honor and ingenuity to get the same any other way. If we ourselves will give credit where the same is due, others will do the same by us. Every honest, well thinking person who reads your valuable journal knows who is the originator of every article your esteemed journal has ever published, and act accordingly. The past has revealed to us that such is the case.

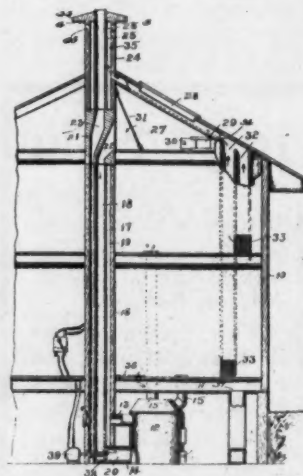
The Wooden Ventilator Co.

East Palestine, Ohio.

Thos. Padgett, Pres.

A FURNACE CHIMNEY AND VENTILATOR.

Carlisle St. John of Des Moines, Iowa, has been granted United States Patent No. 1,011,497 on a furnace chimney and ventilator comprising a lower member consisting of an outer wall and an inner wall spaced apart from each other to provide a smoke passageway between the inner and outer walls, and a fresh air passageway for a furnace within the inner wall. There is a chimney section above the lower section having a passageway therein extending from an air inlet in one side downwardly and inwardly to communicate with the passageway within the inner wall of the lower section, the middle section being also provided with a passageway to communicate with the smoke passageway of the lower section and arranged to discharge at its top near the center, and an upper chimney section composed of inner and outer walls spaced apart, the space within the inner wall being in communication with the smoke passageway of the middle section.

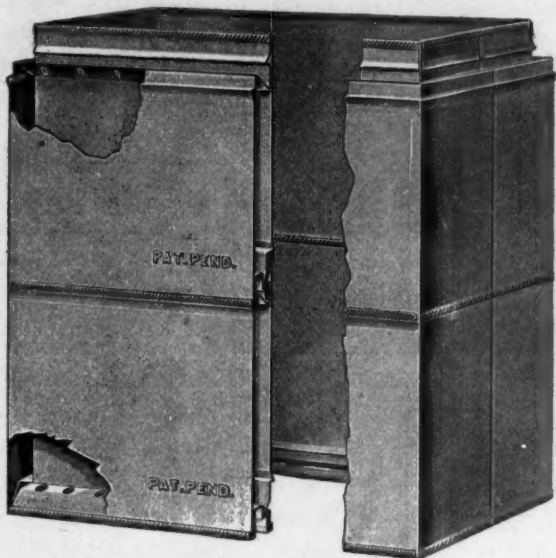


Furnace Chimney and Ventilator.

There is a chimney section above the lower section having a passageway therein extending from an air inlet in one side downwardly and inwardly to communicate with the passageway within the inner wall of the lower section, the middle section being also provided with a passageway to communicate with the smoke passageway of the lower section and arranged to discharge at its top near the center, and an upper chimney section composed of inner and outer walls spaced apart, the space within the inner wall being in communication with the smoke passageway of the middle section.

EXCELSIOR IMPROVED DOUBLE WALL PIPE.

The Excelsior Steel Furnace Company, of Chicago, has just put on the market a new and improved Double Wall Pipe which contains several novel and important features that will no doubt be appreciated by furnace dealers throughout the country. The new pipe is made with a single tongue which enables the different sections to be assembled with great rapidity. It is also provided with an automatic locking device which holds the sections together permanently after they have been assembled and does away with the use



Excelsior Double Wall Pipe.

of solder, thus very largely reducing the cost of installation. The receiving ends are double milled, making the pipe very rigid. In addition there is absolute separation in every section, insuring a non-collapsible pipe under any and all conditions. The construction of both pipe and automatic locking device are shown in illustrations herewith.



Section.

The new pipe is the direct outcome of the tests of double pipe by the Underwriters' Laboratories, Incorporated, of Chicago, which were reproduced in these columns a few months ago. These tests suggested to the Excelsior Company that there was room for improvement in furnace pipe construction and they immediately began to develop the pipe which is now illustrated for the first time. After the new pipe had been perfected and application filed for patents thereon the company received from the engineers of the laboratories a letter reviewing the tests and calling attention to defects which they had discovered in certain makes of pipe and suggesting certain improvements for the benefit of the trade at large. Every one of these improvements had already been incorporated in the new pipe, and it is believed that these improvements will lead to a much wider sale of Double Wall Pipe in future. Samples are to be sent to furnace dealers, architects, fire marshals and others interested in the installation of the most efficient piping. In this con-

nection it may be noted the recommendation of double wall pipe by the Underwriters' Laboratories is being followed by the enactment of ordinances in various cities requiring the use of Double Wall Pipe, Syracuse, New York being one of the latest cities to enact such an ordinance.

In writing to the Excelsior Steel Furnace Company please mention **AMERICAN ARTISAN.**

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS.

The annual meeting of this society will be held in New York on January 23, 24 and 25, 1912. It is said that the Entertainment Committee has made plans of special interest for this meeting, and will have the hearty co-operation of the New York Chapter in an effort to make this event the most successful from every standpoint in the history of the association.

FURNACE HEATING.

The problem of house, flat, school, church or store heating from a central plant is considered by Dr. W. A. Evans in the *Chicago Tribune* from the point of view of the hot-air furnace. The advantages and disadvantages of furnace heat are briefly set forth by Dr. Evans, who was formerly Chicago's health commissioner, as follows:

Heating from a central plant is economical. In this particular, heating by isolated units, such as stoves and fireplaces, cannot compare with heating from a central plant. It is also very much more comfortable heating than that by isolated units. As the object of heating is comfort, it follows that central plant heating represents efficiency.

The question always is, How large should the house be to make the greater economy of the central plant more than offset the cost of installing it and the provision for maintaining it?

There are, though, some advantages outside the first cost. Fire in an open fireplace or a stove will not burn well unless there is air. Where heating is done by steam or hot water or hot-air radiation the heating may be perfect and the ventilation unspeakable. The fire in the basement may be getting an elegant supply of air, while the people upstairs are suffocating. If the stove and the people are in the same room they have to take pot luck together.

There are three kinds of central heating—hot air, hot water, and steam. Hot air, as compared with steam and hot water, has some advantages and some disadvantages. It has provision for circulating the heat throughout the room, and that is a great advantage.

It has two marked disadvantages. They are remediable, and no man should tolerate hot-air heating unless they have been remedied. The air is frequently recirculated. That is to say, no provision is made for taking in fresh air. Some leaks in and some old air leaks out, but the quantities are inadequate, and in the main the bad air goes back to the people and round and round in a vicious circle.

Such a hot-air system as that used in the Chicago

public schools and in public schools generally is not open to that objection.

The other is that the air is heated but not moistened. It is low in humidity.

Lesser disadvantages are these: The heat is put in on the inside wall, and in consequence the inside wall is too hot and the outside wall is too cold. The air as it comes into the room on cold days is too hot to be fit to breathe. The system does not lend itself readily to periodic blowing out of the rooms by throwing open the windows.

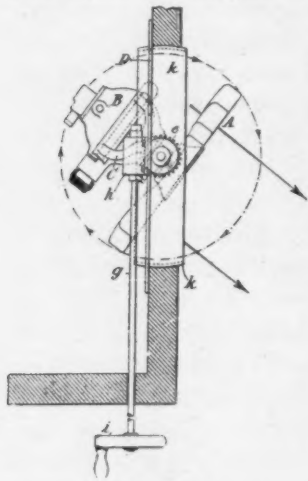
Most of these disadvantages can be overcome. A hot-air heating plant that has corrected them represents a good type of heating and permits of good ventilation.

Rather than put up with the harm of these things it is better to tolerate the discomforts of stove and open fireplace heating.

A NEWLY INVENTED ROTARY FAN.

The American Blower Co., of Detroit, Mich., has been made the assignees of United States Patent No.

1,011,799, granted to James Inglis, of Detroit, Mich., on a rotary fan. Combined in the fan is a support having an opening, a fan wheel mounted in the opening, a tilting frame having bearing for the fan wheel and means for driving the fan wheel. The opening is as large as the diameter of the fan wheel, and the fan wheel is adapted to pass into the opening when tilted.



HEALTHFUL HEATING OF HOUSES.

Ere this the shop windows have displayed rows of trained batteries in the nature of stoves, ranges and heaters of all kinds announcing the battle royal to be fought with Old Man Winter. Gradually these batteries, Shiny Black, Lustrous Bright, Batter Big Chest, etc., are distributed to the houses of our citizens. Once more mere man asserts his superiority, mounts a stepladder to prove it, gets the stove piped, and confers upon himself a sooty mark of distinction, while the real master, the lady of the house, watches it all with a directing eye. Outside is heard the heavy trudging of horses pulling a wagon brimful of coal. Last, but not least, the janitor is becoming more officious. Everything shows preparedness to fight with heat and fervor the onslaughts of winter.

There are many methods of heat, each having its advantages and disadvantages. The great advantages of heating by open fires is that ventilation is added. The disadvantage is that it heats the room unevenly. The outside walls are always cold and the floors are usually so. The fire must have air, and the incoming air is necessarily cold. Arrangements can be made to deflect it, but none can be made to heat it. Open fire-

place heating is adapted to rooms occupied by a few people—for example, sitting rooms.

Open fireplaces in which gas is burned are open to another objection. Frequently rather ornate gas logs are used. The gas flows from a small pipe into a larger space and there escapes from many openings. Frequently these openings are more or less obscured by asbestos. In consequence unburned gas nearly always escapes and in a short while the odor in the room is appreciable.

The remedy is easily applied. Gas logs should be simple and plain, with a small number of openings, and those in such plain view that a point from which gas is escaping into the room could not be overlooked. Occasionally heating is done by a gas burner which has no chimney or flue attached. This is always to be condemned. When gas burns it is not destroyed. It is merely changed into other gases, and these are almost as harmful as the original gas.

And finally those who make use of open fire heating, whether they use coal or gas, should remember that unless the windows are raised or the ventilators are opened the air of the room speedily gets into a harmful condition. This happens more quickly than where there is steam or hot water heating and lack of ventilation.

The conclusion is that for rooms occupied by but few people and with ventilators and windows sufficiently used, open fire heating is excellent. In the milder climates, say south of a line through Memphis and in the southwest, its advantages are great enough to overcome its discomforts. This is true of its use in houses and small halls. It can be adapted to school use in California, the southwest, and in the south beyond Montgomery, Ala.—Dr. W. A. Evans, in *Chicago Tribune*.

PARAGRAPHS.

B. C. Taylor, for many years in the heating business with Mr. Prest at Kansas City, Mo., and more recently in New York, is now associated with the Lennox Furnace Company, of Marshalltown, Ia., as sales manager.

The Charles Smith Furnace Company has been incorporated at Chicago, with capital of \$2,500, to manufacture and deal in furnaces, heaters, etc. Charles Smith, Don M. Compton, Archibald Cattell, incorporators.

The American Furnace Co., of St. Louis, who have been located at 1911-1915 Pine Street, are now building a large brick and concrete factory at 2725-27-29-31 Morgan Street. The new building will be two stories, will cover a plot of ground 73x135 ft., and they expect to have the new factory completed by February 1st, when it will be equipped with a complete line of labor-saving machines in order to take care of the increased demand for their American steel furnaces.

The human race is divided into two classes, those who go ahead and do something, and those who sit and inquire, "Why wasn't it done the other way?"—Oliver Wendell Holmes.

Tinshop

JOB AND TIME SHEETS.

BY O. W. KOTHE.

It is very interesting to note the many different forms of shop cards that are being submitted through the columns of AMERICAN ARTISAN. From the great variety, every employer, no matter how large a busi-

OA / AO
JOB & TIME TICKET

NO. 7695.
THE BLANK SHEET METAL WORKS

Name of Owner:- John Smith

Job located at:- 687, Main St.

Note:- Use separate ticket for each job
Mark time when started and finished

MATERIAL USED: 76 sheets of old style tin					
29 ft. of 6" half round gutter and 15 ft. of 4" spout					
1 Chimney extension 17x17 base and 6 joints of 9" pipe, 20 gauge & valve					
Minor Materials:- 1/2 gal. paint, 2 lbs. nail, Rosin - 1 bushel charcoal					
Solder:- 12 lbs. of 1/2 & 1/2					
LABOR:- Started		Finished			
	8 AM		10 AM		
	11 AM		12 AM		
	1 PM		4 PM		

Remarks:- Job is complete in accordance with estimate. The front bay window needs repairs.

Date Dec. 1-1911

Sign Mechanic Sem Brown

Sign Apprentice _____

Fig 1

ness he has or how small it may be, should adopt some form or system to enable him to keep track of the different jobs as the work is being done. That's what he is in business for—to know what and how much material was used, also the number of hours it has taken to complete the job, and of the minor necessities that are usually omitted which are a dead loss to the employer.

To the observant business eye the want of systematic time card system in every kind of a business has always incurred great losses. In fact it sometimes happens that good sized jobs are forgotten and never charged on the books; then say nothing of the many pounds of solder, nails, sheets of tin, and what not else seldom charged, which are a total loss to the em-

ployer. All this often occurs when there is no routine system for the employe to work under. For instance, when an employe is sent to do a certain job that has just been received over the telephone; as soon as the order is clear to him he gathers his tools and other necessities to complete the work—without even noting the time of day; but hurries to the job. And when he has it finished the material, and the several hours it has taken will sum up to quite a few dollars. Then as soon as he arrives at the shop, he is ordered to do something else, or is sent out on another job, and as these jobs are usually somewhat in a hurry the employe is eager

WEEK TIME CARD

THE BLANK SHEET METAL WORKS

Week ending 1911

What worked on	number of Job	in shop		outside		hours @ per hour
SAT						
MON						
TUES						
WED						
THUR						
FRI						

Car fare
Other expenses

NOTE:- This card must be handed or sent in every Friday evening.

Sign _____

Fig 2

to be on his way, which makes him neglect to make memoranda of the first job. And so he finishes the second job; then by the time he gets to the shop it is near quitting time, and in his anxiety to get home he merely jots down a few of the main items on both jobs; however, at times the first one is forgotten altogether. Now the employer must pay his wages, also pay for the material he used, and failed to charge; but how is the employer to obtain his money if there is no charge made of certain things?

To eliminate much of this trouble Fig. 1 has been prepared as a job and time ticket. This slip has given good satisfaction; has eliminated many serious arguments between customer and employer, and also has acted as judge between the employer and mechanic where a dispute was brought about certain items of a job after it had been completed for some time. This

sheet is blocked in tablet form with numbers from one and up in numerical order.

The employer usually writes the instructions of each job on a piece of scrap paper, and when the employe has the work finished he must write down the name of owner and the location of job as shown. To make it certain that each employe will attend to the charging of the work he produces, he is instructed upon entering the shop as an employe by either the foreman or employer, who gives him strict orders as follows: First, that this sheet must be filled out immediately after the completion of each job, no matter how urgent the next one may be. Second, he must mark down the time when starting to gather his tools until he has completed the work, and must make a thorough itemized statement of all material used. And third, each hour of the day must be accounted for on this sheet, as he is paid only for the amount of time he has tabulated. This latter statement is not legal when it comes to law; but it serves the purpose in some cases in creating incentive in the employe on the charge item; because he surely looks out for his money just the same as the employer must look out for his.

The word MATERIAL usually only impresses the employe as the larger and more bulky articles, while solder, nails, paint, etc., where they are used in small quantities are frequently omitted. So by adding **SOLDER**, also **MINOR MATERIALS** in bold letters it causes him to call the entire job back to mind, and so he is sure to mark down everything that was used. Then on the labor question he marks down when he started and finished. Should he be called away from his work, he then marks down when he left, and again when he returns to complete the work. In this manner of tabulating the time there can be no dispute between customer and employer because the sheet tells exactly what time of day the mechanic was on the job. Under the heading **REMARKS** the employe should write in what state the work was left, and such other remarks as may be proper to protect the employer from future embarrassments. Last, the employe must sign his full name, and if an apprentice was with him it is his duty to also tabulate his time.

The employer goes over this sheet and marks down the prices for each item and totals them, then hands them to the bookkeeper to be entered in the ledger; after which this sheet is filed away in a form of a loose ledger system as shown by the holes A.

This sheet is filed away indefinitely so it can be referred to when necessary. Then, too, when the employe hands the mechanic a slip having the drawing and dimensions for a certain article of a given size; and when the article is finished the usual practice in most shops is to destroy the slip, so when there is an error it is a difficult matter to place the blame. However, with this job sheet the article is recorded and the error falls on the proper person.

Many large shops have a weekly time card as shown in Fig. 2. With this card each man who works on a certain job is given the number for it, and he must put the number in the proper column; state on what he worked, also the number of hours, which must correspond with the days he worked on that job. Then he

also marks whether he worked in the shop or outside, and every Friday evening he is supposed to total up his time, and put down the amount due him, which must be sent in every Friday evening so the bookkeeper can record these items in his books and have the money ready for Saturday noon.

ST. LOUIS SHEET METAL CONTRACTORS' ASSOCIATION.

Invitations are out for the joint installation of officers and second annual banquet of the Sheet Metal Contractors' and Sheet Metal Consumers' Protective Associations, of St. Louis, Mo., to be held at Henry Roth's Cafe, 3334 Olive street, on Wednesday, January 3, 1912, at 6:30 p. m. sharp. Price, \$1.50 per plate. The menu comprises: Cocktail a la mariatic acid; galvanized blue points; cut down celery; asbestos covered olives; fireproofed grilled lake trout; corrugated Saratoga chips; riveted and soldered sweetbreads; crimped mushrooms; square mitered roast turkey; counter flashed oyster dressing; painted French peas; stamped whipped potatoes; ridge roll Waldorf salad; hot air cheese; cigars, a la smokeflue, etc.

The officers of the Sheet Metal Contractors' Association for 1912 are: Walter Wimmer, president; F. B. Higgins, vice-president; Otto E. Cluss, secretary; John Clemens, treasurer; Wm. Schwartz, sergeant-at-arms. Directors: Charles Hopmann, H. W. Symonds, R. E. Mackey, Sam Simon and J. M. Powers.

The officers of the Sheet Metal Consumers' Protective Association for 1912 are: O. E. Epenter, president; J. F. Bannon, vice-president; Frank B. Higgins, secretary; Jos. D. Frick, financial secretary; Wm. Lampert, treasurer; Louis Wallrop, sergeant-at-arms. Directors: George W. Wonderlich, Joseph Bence, Frank T. Bokern.

TIN PLATE MANUFACTURERS ORGANIZE.

The "Association of Sheet and Tin Plate Manufacturers" has been organized at Pittsburgh. The objects of the organization, as set forth in the charter, are the general welfare of the sheet and tin plate trades; the stimulation and exploitation of the use of the products of the industry; the betterment of labor conditions and the collection of facts relating to the industry.

The new organization is chartered under the laws of Pennsylvania; with perpetual charter, seven directors and no capital stock. The organizers aim at the collection and distribution of information of use to members of the trade, whereby the consumption of their products may be increased and technical and commercial information relative to the products may be given to members. In formulating plans for the formation of the association the subject of price regulation and maintenance has been carefully avoided, it being the universal sentiment among the manufacturers that this general subject should not be entered upon even in the most informal way.

The members present and participating in the organization were:

J. E. Carnahan, Carnahan Tin Plate & Sheet Company, Canton, O.

W. A. Thomas, Thomas Steel Company, Niles, O.
John W. Watson, Canonsburg Steel & Iron Works, Canonsburg, Pa.

Wade A. Taylor, Deforest Sheet & Tin Plate Company, Niles, O.

C. F. Niemann, Parkersburg Iron & Steel Company, Parkersburg, W. Va.

C. A. Irwin, Canton Sheet Steel Company, Canton, O.

Joseph B. Andrews, Newport Rolling Mill Company, Newport, Ky.

S. B. L. McVey, Seneca Iron & Steel Company, Buffalo, N. Y.

Samuel Siddall, Empire Iron & Steel Company, Niles, O.

C. T. Swaney, Massillon Rolling Mill Company, Massillon, O.

J. J. O'Connor, Washington Tin Plate Company, Washington, Pa.

George W. Niedringhaus, National Enameling & Stamping Company, St. Louis, Mo.

W. Langenbach, Stark Rolling Mill Company, Canton, O.

R. D. Campbell, Allegheny Steel Company, Brackenridge, Pa.

STUDIES IN LEAD POISONING.

The subject of industrial lead poisoning has been studied by the United States Department of Commerce and Labor and the results of several investigations along this line have been reported. Dr. Sir Thomas Oliver investigated the experience of European countries in this matter. He found a general sentiment in Europe against the use of lead in the arts. In France, at the end of five years, the use of white lead will be prohibited in all painting, both in the interior and on the exterior of buildings. In Austria and in several of the Swiss cantons the use of white lead is forbidden in interior decoration. In several other continental countries steps have been taken toward the prohibition of the use of lead in interior painting.

Next to painting, the white lead industry has furnished the greatest amount of lead poisoning among British lead workers. In 10 years the cases reported numbered 1,295, of which 31 were fatal. Regulation has effected great improvement. Where there were 358 cases in 1900, the number in 1908 was 79, and in 1909 only 32.

The manufacture of china and earthenware is one of the most fruitful sources of industrial lead poisoning in Great Britain. There are 550 places where pottery is made, and 63,000 persons are employed. Of these, 6,865 are employed in occupations involving contact with lead and 22,000 are daily incurring danger from breathing dust.

The ravages of lead poisoning in the manufacture of pottery are traceable to the use of glass containing lead, but great as is the risk to health from this cause it is considerably less than the possibility of lung diseases due to breathing dust.

While cases of lead poisoning among printers and typefounders are numerous, it appeared as an immediate cause of death among British printers in only 17 cases in 10 years.

The prevention of lead poisoning requires especially cleanliness of the workshop and of the individual worker who is exposed to lead in any form. Ample washing appliances must be provided, with plenty of hot and cold water, soap and towels. No food should be eaten in the workrooms, and never at any time or in any place until after the hands and face have been thoroughly washed. No work in a lead factory should ever begin for the day by employes who have had no food. Wherever practicable, dustproof machinery should be used, and so far as possible any dust caused by the manufacturing processes should be taken care of by exhausts. Respirators should be provided and their use made compulsory in necessary dusty work. Above all, the employes should be carefully instructed in regard to the danger to which their occupations exposes them, and periodical medical examination of workers in lead processes should be provided.

In a study of the white-lead industry in the United States, by Dr. Alice Hamilton, 23 of the 25 factories known to be manufacturing white lead were covered.

Dr. Hamilton found in the 23 factories 358 specific cases of lead poisoning, 16 of them resulting in death, which occurred in the 16 months from January 1, 1910, to April 30, 1911.

No information is available to show the number of cases of sickness and the deaths resulting from lead poisoning in the United States or in any state, for heretofore there has been no legal requirement as to the making of reports. However, during the legislative sessions of the present year, laws have been enacted in six states requiring reports by physicians of all cases of occupational diseases occurring in their practice. Those are California, Connecticut, Illinois, Michigan, New York and Wisconsin. Bills have been also introduced in other states, and, after their enactment, an accurate basis will be available for the study of occupational diseases and the betterment of occupational conditions.

THE RETAIL MERCHANT AND THE SHERMAN LAW.

Before a special committee of the Interstate Commerce Committee of the United States Senate, on December 9, 1911, at Washington, J. R. Moorehead, of Lexington, Mo., presented a statement in behalf of the National Federation of Retail Merchants, of which he is secretary. Mr. Moorehead said, in part, as follows:

There is a great outcry in this country just now for the elimination of the "middle man," better known as the retail merchant, although the wholesaler and jobber may be classed as such. Our answer to this demand is, that we do not propose to be eliminated if concerted action on our part should be able to show the Congress and the Legislatures of the several states that we have a place in the economy of the country and that our preservation is for the best interest of the greatest number for their economical, political and social welfare. This outcry emanates from four principal sources, first the great aggregations of capital known as mail order

houses; second, almost all of what are known as farm journals; third, a great part of the metropolitan press; fourth, many politicians seeking to curry favor with the farming and laboring classes. These elements in our national make-up, along with others of lesser influence, have brought about a condition in the minds of the public adverse to the retail merchants, especially among the farmers and laboring men, that is no less than criminal. To my mind, this is the most serious side of the whole question. Just to think that it has been possible in this country of ours to so organize and conduct a campaign of advertising to so poison the minds of hundreds of thousands of people scattered all over the country, against their neighbors, the home merchant, that they will not even give us a chance to meet outside competition. Under these false representations carried on for so long, the public seems not able to distinguish between our efforts to obtain a fair living and the practice of extortion. They set us down as extortionists without argument or chance to be heard.

I am not here to criticize the president of the United States or the attorney general, or any of his assistants. I have had occasion to more particularly call the president's attention to some of these facts and conditions, and the reply to my communication comes through the office of the attorney general to the effect that "It is not the duty of those upon whom the responsibility of the enforcement of a law is imposed to consider general economic questions in determining whether a prosecution should be had for its violation." This being the case, which I am perfectly willing to admit without any question whatever, then it is the duty of Congress to settle economic questions if it is in their power so to do. I have mentioned four of the principal elements that are just now, intentionally or not, working to the undoing of the little man in business. Gentlemen, the attempt at combination or concentration of business into the hands of a few is no more manifest or real than is now being brought about in the distribution of merchandise of every kind, known as the retail business. This country has been wonderfully prosperous in the last ten years. I venture to assert that there never was a time in the history of this country, taking into account the last five years or more, when there were so many people in every walk of life who were doing so well, making such a good living, getting such prices for farm products and live stock, making better wages, better housed, better fed, better clothed, and, taking all things into consideration, no greater general prosperity ever existed in the country. We can, and do, rejoice in this fact. Not one of us would reduce the price of a single item raised upon our farms or produced by our labor, but I am confident that I am within the truth when I say that the million or more retail merchants of this country have received less of the benefits growing out of this great era of prosperity than any other class of our people. I feel safe in saying that the little merchants of the country have not reaped their share of the reward. Their business nor their profits have grown in proportion to the general prosperity that surrounds us. Certainly there has been a greater consumption of merchandise in the shape of clothing, food and every other class of goods used by humanity, but the increase has not fallen into the laps of the small retailer. When you have the opportunity to go amongst your constituents, who are the retailers of merchandise, you will surely find that the great majority of them have done little more than hold their own. Many of them do not do that well. Farm lands have increased beyond all expectations, and I am not saying they are too high. Wages have increased, but I do not say that labor is too well paid. No one knows better than those for whom I speak that upon these two elements rest our security and prosperity, and they have no better friends or defenders in the country than their home merchants, but we do assert, with emphasis, that the business, the store houses, the homes, the stocks of goods and the profits of the retailers have not grown in proportion to that obtained by either of the above mentioned class, or any others. Where has it gone? Who has gathered the harvest? I have said that "mail order houses" are one of the factors that has brought about this condition of affairs. What are some of the facts? It has gone the rounds of the press, and is no doubt a fact, that one of these houses alone sold more than \$63,000,000

of merchandise by mail last year. The business of one increased, it is said, 1,000 per cent in three years. So much business that they were scarcely able to take care of it. And while the "control of trusts" and the influence of Wall Street are pertinent questions for debate at this time, I venture to remind you that it is not disputed that the chairman of the board of directors of the largest mail order house in this country is the president of one of the largest banks in New York. It might not be out of place to suggest that this would be a fruitful field for investigation. If the business of this class is to go on increasing, how long will it be before there will be dictation to the jobber, wholesaler and manufacturer as to whom they shall sell and we can imagine what would happen to the little fellows in business.

NOTES AND QUERIES.

HEAT DEFLECTORS FOR STEAM RADIATORS.

From A. E. Froyd, 528 Fifteenth St., Moline, Ill.

Please advise us where we can get heat deflectors for steam radiators.

Ans.—Mellish-Hayward Co., 158 W. Kinzie St., Chicago, Ill.

BROOM MAKING MACHINERY.

From H. E. Goodwin, 619 N. Rendon St., New Orleans, La.

Can you give me names of firms making hand broom-making machinery?

Ans.—Genesee Valley Mfg. Co., Mt. Morris, New York; Hand Stitch Broom Sewing Machine Co., Pittsburgh, Pa.

FRENCH BRASS FOLDING FIRE SCREENS.

From Wolff, Kubly & Hirsig, Madison, Wis.

Please give us the address of manufacturers of French brass folding fire screens.

Ans.—Wm. H. Jackson Co., 206 S. Michigan Ave., Chicago, Ill.; G. M. Thurnauer & Bro., New York City; Lewis & Conger, New York City; Wm. Hodges & Co., Philadelphia, Pa.; S. M. Howes Co., Boston, Mass.

ITEMS.

Wm. E. Harris, of Niles, Ohio, a pioneer tin plate manufacturer, died recently at his home in Niles.

The Consolidated Sheet Metal Works, of Milwaukee, Wis., send out to the trade a substantial celluloid rule six inches long, with gauge measurements in addition to inches. This is a very serviceable tool and a neat reminder of the company.

J. Charles Wicks succeeds J. D. Waddell as sales manager of the Empire Iron & Steel Co., of Niles, Ohio. Mr. Waddell has resigned the offices of treasurer and sales manager of the company. A new treasurer will be elected at the annual meeting in January. The new sales manager, Mr. J. Charles Wicks, is well and favorably known in the trade and brings to his work a wealth of experience that cannot fail to make his administration highly successful.

RECEIVED MANY ANSWERS.

TO AMERICAN ARTISAN:

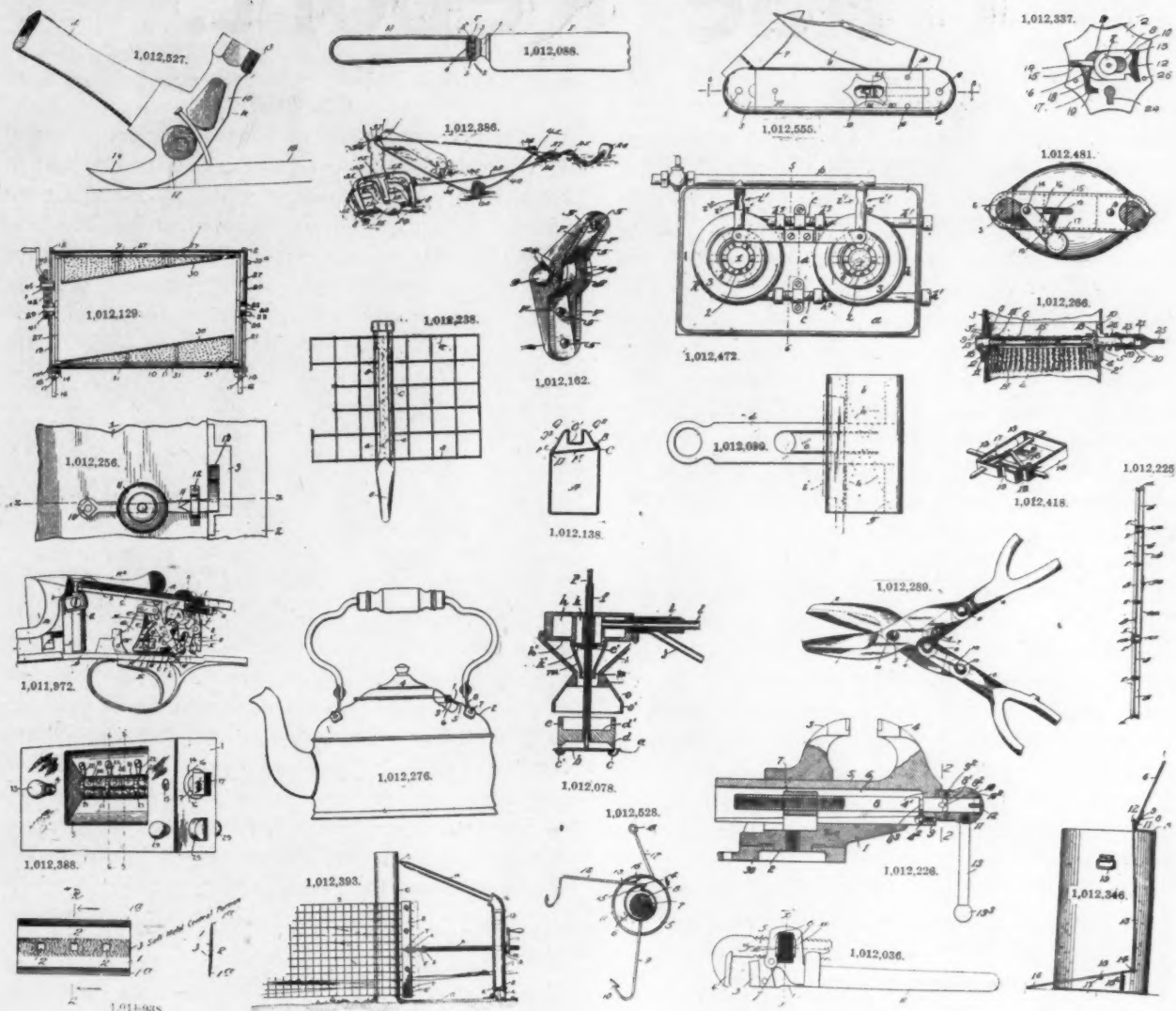
I wish you would please take out my ad for tinner as I have received quite a number of answers, and oblige.

SAM BERGH.

Wayland, Iowa.

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NEW PATENTS.



1,011,938. Razor-Blade. Henry J. Gaisman, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a corporation of New York. Filed April 5, 1909. Serial No. 487,919.

1,011,972. Single-Trigger Firearm. Allan Edward Lard, St. Joseph, Mo. Filed July 24, 1903. Serial No. 166,898.

1,012,036. Wrench. John H. Vinton, Boston, Mass., assignor to Trimont Manufacturing Company, Roxbury, Mass., a corporation of Maine. Filed June 23, 1911. Serial No. 634,864.

1,012,078. Can-Soldering Tool. Robert L. Holliday, New Brighton, N. Y. Filed May 1, 1911. Serial No. 624,392.

1,012,088. Hollow-Handled Knife, Fork and Other Implement. William W. Lee, Northampton, Mass.; Helen Lee, administratrix of said William Wilson Lee, deceased. Filed June 13, 1911. Serial No. 632,887.

1,012,097. Razor-Strop. Ferdinand Alfred Reichardt, Elizabeth, N. J. Filed March 24, 1908. Serial No. 422,879.

1,012,129. Vegetable-Peeler. August C. Fast, East Orange, N. J. Filed Sept. 7, 1910. Serial No. 580,885. Renewed July 6, 1911. Serial No. 637,094.

1,012,138. Metallic Window-Sash. Edward Johnson, Chicago, assignor to Forsyth Brothers Company, Chicago, Ill., a corporation of Illinois. Original application filed Jan. 29, 1909. Serial No. 474,988. Divided and this application filed Feb. 4, 1910. Serial No. 542,094.

1,012,162. Hinge. William Roper, Philadelphia, Pa. Filed Feb. 8, 1911. Serial No. 607,249.

1,012,225. Metal Casement. William Roper, Philadelphia, Pa. Filed Feb. 1, 1911. Serial No. 605,936.

1,012,226. Vise. Laroy S. Starrett, Athol, Mass., assignor to L. S. Starrett Co., Athol, Mass., a corporation of Massachusetts. Filed June 29, 1910. Serial No. 569,436.

1,012,238. Fence-Post. Levi Bonnell, Earlville, Ill. Filed June 10, 1911. Serial No. 632,363.

1,012,256. Door-Latch. Jacob P. Imig, San Jose, Ill. Filed Sept. 28, 1909. Serial No. 520,030. Renewed June 23, 1911. Serial No. 635,021.

1,012,266. Pipe-Damper and Mounting. William H. Miller, Crawfordsville, Ind., assignor of one-half to Arthur H.

Kohls, Crawfordsville, Ind. Filed Feb. 4, 1911. Serial No. 606,466.

1,012,276. Sheet-Metal Vessel. Albert R. Pritchard, Rochester, N. Y. Filed Aug. 14, 1911. Serial No. 644,022.

1,012,289. Compound-Lever Shears. Arthur J. Stich, Detroit, Mich., assignor to International Tool Company, Detroit, Mich., a corporation of Michigan. Filed Oct. 17, 1910. Serial No. 587,628.

1,012,337. Lock. Josef Dunai, Racine, Wis. Original application filed May 5, 1911. Serial No. 625,151. Divided and this application filed July 31, 1911. Serial No. 641,575.

1,012,346. Lid-Opening Device for Garbage Cans. James A. Fraser, Freedom, Pa. Filed Sept. 1, 1911. Serial No. 647,235.

1,012,386. Animal-Trap. Hugh L. Mainland, Burkes, near Dunedin, New Zealand. Filed Feb. 16, 1911. Serial No. 608,902.

1,012,388. Combination-Lock. August L. Mandula, Streator, Ill., assignor to Paulina Mandula, Streator, Ill. Filed April 6, 1911. Serial No. 619,318.

1,012,393. Wire-Stretcher. John H. Matthews, Monticello, Iowa. Filed March 13, 1911. Serial No. 614,081.

1,012,418. Sash-Lock. John Obenchain, Thomas, Ala. Filed April 24, 1911. Serial No. 622,958.

1,012,472. Gas-Stove. John Steinmassl, Corona, N. Y., assignor to himself and Albert Weinkauf, Jamaica N. Y. Filed March 18, 1911. Serial No. 615,272.

1,012,481. Flat-Iron with Detachable Handle. Leon Trestman, New York, N. Y., assignor of one-half to Isaac Schereschewsky, New York, N. Y. Filed Jan. 26, 1911. Serial No. 604,790.

1,012,527. Combination Hammer and Nail-Puller. William A. Day, Bellingham, Wash., assignor of one-half to Victor I. Bradway, Bellingham, Wash. Filed March 22, 1911. Serial No. 616,126.

1,012,528. Fish-Hook. Gabriel H. W. Doose, San Francisco, Cal. Filed Dec. 23, 1910. Serial No. 598,892.

1,012,555. Pocket-Knife. William M. Irick, San Angelo, Tex., assignor of one-half to James B. Ganong, San Angelo, Tex. Filed April 12, 1911. Serial No. 620,639.

Trade Report.

HARDWARE.

One of the best evidences of the return of prosperity is the fact that the usual holiday vacation of twelve days in the steel trade has been cut to two days, or four including the two Sundays. The mills resumed on December 26, close on December 30th, and reopen on January 2d. At the Carnegie mills in Homestead, where two weeks ago official notice was posted that the millmen would be allowed to lie off from the Saturday before Christmas to the day following New Year's, that order was countermanded and the open-hearth steel crews were notified to report at 3 o'clock next Tuesday morning to get the steel in shape for the rolling mill crews at noon of the same day, when the plant will be in full operation.

Orders which were issued a fortnight ago for the banking of merchant pig iron furnaces over the holidays have been rescinded and pig iron production has been maintained through Christmas week, while furnaces that have been idle since last May will start on January 2d. Extensive plans have been approved for steel mill resummptions at the beginning of January and from a rate of 75 per cent of maximum capacity during the first half of this month the steel industry promises to be running at 90 per cent of maximum on January 2d.

While prices this week are stationary, the markets are all very firm and predictions are freely made that advances will be in order after the first of the year.

TIN PLATE.

The market is steady in view of the fact that the mills have sold a large production for 1912. It is said that some mills have contracted for fully three-fourths their total output for the coming year. These sales were made on the \$3.40 basis, slight concessions being given to very large buyers when they placed their entire contract with a mill. On carload and other small lots the market is quotable at \$3.40, large lots going at about \$3.30.

The Washington Tin Plate Company has completed the rebuilding of its plant, and will put it in operation on the first of next month.

The Jones & Laughlin Steel Company is this week starting four of its second unit of 12 tin mills at the Aliquippa plant. The remaining eight mills will be started very early in the new year. These changes increase the list of regularly operative independent mills in the United States to 145.

SHEETS.

There has been no change from last week in sheet prices, the majority of sellers now quoting on the basis of \$1.90, Pittsburgh, equal to \$2.35, Chicago, for 28 gauge black and \$3.35 galvanized. It is understood to be possible to shade this level by \$1 a ton with a few mills. Buying is somewhat heavier and deliveries are also better, so that sheet mills are able to maintain a fair gait of operation.

COPPER.

A further strengthening of the market is noted and electrolytic copper, New York, is firmly held at 14.25c, with no disposition to force the metal on the market. In some quarters the opinion has been expressed that the recent advance has largely been the result of a movement under the management of large and powerful foreign trading interests in combination with strong American interests close to some of the producers. During the buying movement there have been a great many copper warrants taken up in London, but at the same time it is believed the same interests were selling foreign consumers. It is therefore thought that they are in a very strong position to continue their movement, and take up the large amount of standard copper they have purchased, which will have to be delivered to them during January, and this seems to be the principal reason why some of the trade believe that the market will not only be held, but will be put higher. Others in the trade hold the impression that the movement has been largely a speculative one, and has been too rapid, and that a reaction is likely to take place now at any moment; in other words, that the better outlook for business has been more than discounted by the improvement we have had in copper. It remains to be seen which view is to prove the correct one.

TIN.

The market remains steady at about 45 cents New York. During the week spot bids were moved up from 44.60 to 44.75 cents while the asking price was stationary at 45 cents. London advanced from £205 to £206. The December imports are about 3,500 tons. It is reported that 44 $\frac{7}{8}$ has been paid for January tin.

SPELTER.

The market is firmer and there is a decided effort being made to give the market a stronger appearance and to talk a better market. There seems to be very little metal for sale.

There is no indication of any marked increase in the production, and smelters are again talking independently, as they have evidently gotten completely over their recent panic. Receipts are light. St. Louis quotes \$6.10@6.20; New York, \$6.25@6.35.

LEAD.

Both the New York and East St. Louis markets were quiet and unchanged. Advices from the far West report important mining operations. A \$1,000,000 smelter is to be erected and placed in operation on the Snowshoe mine near Libby, Mont., and a railroad is to be built from Libby to the mine.

The larger companies are taking a very hopeful view of the outlook, and predict a further advance in prices in the near future. Receipts at St. Louis for

the week were less than one-half as large as the unusually heavy receipts a year ago, but buyers are preparing to stock up before the close of the year, and consumers are beginning to figure ahead in their orders for their supplies. White lead manufacturers are coming into the market and the situation generally shows a big improvement. The present quotation is based on 4.37½ St. Louis.

PIG IRON.

The usual holiday quiet characterizes the pig iron market. Buying is expected to start early in the New Year. It is reported that many consumers were caught in the big covering movement of the past month, thirty days, and find themselves under the necessity of immediately contracting for their first quarter requirements. Such intending buyers will find firmer prices than were the rule two weeks ago. Ohio furnaces are quoting \$13.50, furnace, and Buffalo interests are firm at the recent advance of 50 cents, while Pennsylvania producers have marked up values by about the same amount. Southern iron stands at \$10.25 for the second quarter of 1912, while production is well sold up for the first quarter.

CHICAGO MARKET.

Lake Superior charcoal.....	\$16.50@17.00
Northern Foundry No. 1.....	14.50@14.75
Northern Foundry No. 2.....	14.00@14.25
Northern Foundry No. 3.....	13.75@14.00
Southern Foundry No. 1.....	14.60@14.85

PITTSBURGH MARKET.

No. 2 foundry.....	\$13.90@14.15
Gray forge.....	13.65
Bessemer.....	15.15
Malleable.....	13.40
Basic.....	13.40
Southern No. 2.....	14.65@14.90
Southern forge.....	13.65@13.90

BIRMINGHAM MARKET.

No. 2 foundry.....	\$ 9.75@10.00
No. 3 foundry.....	9.25@ 9.50
No. 2 soft.....	10.00@10.25

Rogers, Brown & Co., of Cincinnati, in their market report of December 30, 1911, say:

The extent of the iron and steel industry and its close connection with so many others, makes its condition at any given time a fair index to the whole industrial and commercial situation. Just now it is especially interesting as entering on a period of activity, and a review of the year's conditions just passed, while unusually lacking in interest, is not without value.

It is not so much that the condition of the pig iron market in general can be pointed to as the cause or effect of activity in other industries, but it holds such an intimate and conspicuous relation to them that it reflects their movements to an unusual degree. The last week of the year, Holiday Week, is generally the most depressed of all. This year, however, there is activity and a marked departure from previous records in this way.

The good buying movement of the last three or four weeks, with its presage of better things to come, does not, however, cause entire forgetfulness of the year as a whole, and its poor business, low prices and general unsatisfactory character from the ironmaker's standpoint. To be sure it has had bright moments which were encouraging but were always followed by a return to the same low scale which had been in force prior to the slight changes for the better. There has been the deadly sameness throughout the year that has meant the blowing out of furnaces, reduction in output and actual loss in most cases for manufacturers which kept running.

Whereas in previous years Southern iron has fluctuated during the twelve months to the extent of \$10.00 or \$15.00 per ton, even in recent years, the record of Southern No. 2 Foundry at Cincinnati during 1911 was high \$14.25 and low \$13.00. Starting in January on the basis of \$14.25, this price ruled until early June, almost six months, con-

tinuously, at that time registering \$13.75, and the following week going to \$13.50, where it has remained consistently until it struck \$13.25 early in December. At the present time the Southern market is stronger with an advancing tendency, and in the case of some furnaces an advance of 50c per ton over the figures in early December.

Northern iron has pursued the same course. Starting out at \$15.70 in January at Cincinnati, Northern No. 2 held this price until the middle of April, when a slump of 50c per ton brought it down to \$15.20 for the following five weeks, and in the middle of June going to \$14.70, where it has been ruling until early December, when another cut of 50c per ton was registered. At the present time \$14.20 is the figure at Cincinnati for spot business, but as most of the recent buying has been for future deliveries the price is better and the advancing tendency is stronger even than in Southern brands, as the Furnaces' books are in better shape.

Production of pig iron during 1911 has been uniformly small. The total production for the twelve months will not go over twenty-four million tons, if it does this. Conservative estimates place the production at a trifle over twenty-three million tons for the year. This is opposed to 26,800,000 tons in 1910 and 25,300,000 tons in 1909. December will probably be one of the largest months of the year. Starting out in January of 1911 with production of 1,700,000 tons, there was little change in February and a slight increase in March, carrying these figures over two million. There was little change in April and then began a decline for three months, stopping in August with slight increase, which has since kept up.

The general consumptive capacity of this country is, of course, greater than ever before and during 1911 most lines have kept steadily at it with increasing tendency. There has been political unrest and the continued attitude of railroads against making any but absolute expenditures, which has perhaps had the greatest influence on the manufacture and consumption of iron, which otherwise would have brought the figures well up to the greatest in history. It is largely the railroads which have made the buying movement in the last two months. Purchasing of structural material, rails and rolling stock have been highly satisfactory. Car shops are running fuller capacity now than for some years and steel makers are optimistic.

Locally buying for next year has been good and the Southern Ohio furnaces, which ship a great portion of their output into this territory, have their order books for the first half in excellent shape. Some are now refusing to take business for these deliveries except at an advance and the outlook for 1912 is good.

Considering 1912 in its relation to the iron trade, it is best to state that the prevailing thought in the metal trade is one of hopefulness and optimism. 1912, it is expected, will start in easy, and, it is hoped, will gradually improve, although a year of political unrest which should be taken into serious consideration. Whereas a year ago the country had reached a point in its productive capacity somewhat in advance of its consuming ability, it is thought there is now more nearly a point of balance between the two than there was twelve months ago, and this should have undoubted effect on the improvement of iron market conditions especially.

Matthew Addy & Co., of Cincinnati, in their market report of December 30, 1911, say:

From a tonnage standpoint December has been the best month of the year. Orders have come in a flood—the ice of timidity and doubt has been broken and the rising tide of hopefulness and reawakened enterprise is sweeping onward bank full. Metaphor aside, it is a little early in the iron trade for the ice to break up—it usually happens as in nature in the Spring of the year—and this December buying movement is on that account the more extraordinary. The whole situation has been immeasurably changed for the better since the month began. Furnace order books have been filled, prices have stiffened and advanced, and future operations have been assured. But the most striking thing that has been accomplished is the genuine alteration in the mental attitude of the iron masters. They have been down in the depths—de profundis—and now they have taken a new lease on life and are looking abroad on the world aggressively and cheerfully. They realize that they are not yet dead by any means, but that, unlike the White Man's Hope, they can and will come back.

The year that is closing has been disastrous. No one wants to recount its troubles, its falling prices, its general torpidity and aimlessness. But the new year is opening under different conditions and it promises to atone for some of the sufferings of 1911.

Business during the week in spite of the holidays has been brisk. Prices of Southern Iron are up fifty cents. Northern Iron is absolutely firm. Coke is active and in excellent demand.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.	LEAD.	AUGURS.	BEATERS.
FIRST QUALITY BRIGHT PLATES.	American Pig.....\$4 55 Bar.....4 55 National (White) brands (in less than 100 lb lots), per lb.....7c	Boring Machine70% Irwin's.....40&10% Carpenter's Nut70% Hollow. Bonney's—list \$30.00.....75&5% Stearns, No. 3.....36 00 Post Hole. Digwell, 8-inch.....per doz. 12 50 Iwan's Post Hole and Well.. 40% Vaughan's, 4 to 9-in., per doz. 6 60 Rafting. Snell's.....50&5% Ship. Ford's, with or w/out screw.40-10% Snell's " " " " 40-5%	Carpet. per doz. No. 13 Tinned Spring Wire .. \$0 95 No. 11 Spring Wire coppered .. 1 30 No. 10 Preston..... 1 00 Egg. Per doz. No. 50 Imp. Dover \$0 75 No. 102 " " " tinned.... 85 No. 150 " " " hotel..... 1 60 No. 10 Heavy hotel tinned... 2 10 No. 13 " " " " " 3 30 No. 15 " " " " " 3 60 No. 18 " " " " " 4 50
IC 14x20.....\$6 40 IX 14x20.....7 45 IXX 14x20.....8 60 IXXX 14x20.....9 85 IXXXX 14x20.....11 00 IC 20x28.....13 70 IX 20x28.....15 70 IXX 20x28.....18 15 IXXX 20x28.....20 55 IXXXX 20x28.....22 95	Sheet. Pull coils.....per 100 lbs. 16 25 Cut coils.....per 100 lbs. 6 25	Call. 3-inch Nickered Rotary Bell, Bronzed base.....per doz. \$5 00 Cow. High Grade.....60% Kentucky.....65&10% Door. Per doz. New Departure Automatic..... \$6 50 Rotary. 3-in. Old Copper Bell..... 4 00 3-in. Old Copper Bell, fancy.. 6 00 3-in. Nickered Steel Bell..... 4 50 3-in. Nickered Steel Bell..... 5 00 Hand. Hand Bells, polished.....40&10% White Metal.....40% Nickel Plated.....30% Swiss.....40&33% Silver Chime.....33% Miscellaneous. Church and School, steel alloy . 50% Farm, lbs..... 40 50 75 100 Each.....\$1.90 2.40 3.55 4.75	
COKE PLATES.	ALUMINUM.	BELLOWS.	BELLS.
Cokes, 180 lbs.....IC 20x28 \$ 8 10 Cokes, 200 lbs.....IC 20x28 8 40 Cokes, 216 lbs.....IC 20x28 8 80 Cokes, 270 lbs.....IX 20x28 10 75	Carload lots. No. 1 Pure Ingot.....per lb., \$0 24 Sheets....." 33	Blacksmiths'.....65% Hand. 8-inch.....per doz. \$8 50 10-inch....." 10 50 Moulders. 12-inch....." 13 00	Call. 3-inch Nickered Rotary Bell, Bronzed base.....per doz. \$5 00 Cow. High Grade.....60% Kentucky.....65&10% Door. Per doz. New Departure Automatic..... \$6 50 Rotary. 3-in. Old Copper Bell..... 4 00 3-in. Old Copper Bell, fancy.. 6 00 3-in. Nickered Steel Bell..... 4 50 3-in. Nickered Steel Bell..... 5 00 Hand. Hand Bells, polished.....40&10% White Metal.....40% Nickel Plated.....30% Swiss.....40&33% Silver Chime.....33% Miscellaneous. Church and School, steel alloy . 50% Farm, lbs..... 40 50 75 100 Each.....\$1.90 2.40 3.55 4.75
PIG IRON.	HARDWARE.	AWLS.	BEVELS, TEE
North'n Fdy., No. 1.... \$15 00 North'n Fdy., No. 2.... 15 00 North'n Fdy., No. 3.... 14 75 Southern Fdy., No. 1... \$14 85@ 15 10 Southern Fdy., No. 2... 14 35@ 14 60 Southern Fdy., No. 3... 13 85@ 14 10 Lake Sup. Charcoal.... 16 50@ 17 00 Malleable..... 15 00	ADZES. Carpenters'. Plumbs.....40% Coopers'. Barton's.....15% White's.....15% Railroad Plumbs.....40% Ship. Plumbs.....40% White's.....15%	Brad. No. 3 Handled.....per doz. \$0 40 No. 1050 Handled....." 95 Shouldered, assorted, 1 to 4, per gro. \$3 60 Patent asst'd, 1 to 4... " 75 Harness. Common....." 95 Patent....." 90 Peg. Shouldered....." 1 50 Patent....." 65 Scratch. No 1 handled....." 4 80 No. IS, socket handled per doz. 1 25 No. 7 Stanley....." 1 80	Stanley's, rosewood handle, new list.....25% Stanley's iron handle.....25%
BLUE ANNEALED SHEETS.	AMMUNITION.	AXES.	BINDING, OILCLOTH.
No. 10.....per 100 lbs. \$1 95 No. 12.....per 100 lbs. 2 05 No. 14.....per 100 lbs. 2 10 No. 16.....per 100 lbs. 2 15 No. 18-20.....per 100 lbs. 2 20 No. 22-24.....per 100 lbs. 2 25 No. 26.....per 100 lbs. 2 30 No. 27.....per 100 lbs. 2 52 No. 28.....per 100 lbs. 2 30	Caps, Percussion—per 1,000. F. L. Waterproof, 1-10s.....47c G D.....35c Musket.....68c	Boy's Handled. Lippincott, 3 lb.....per doz. \$6 50 Marshall Falls City... " 5 50 Broad. Plumbs, West, Pat.....33% " Can. Pat.....35% " Firemen's (handled).....per doz \$19 00 Plumbs, Miners' (handled) " 9 00 Single Bitted (handled) Blood's Champion.....\$10 00 Blood's Dull Finished..... 9 00 Rough Rider..... 8 00 American..... 7 00 Perfect Premier, Forest Clipper 10 00 Duquesne..... 6 00 Double Bitted (without handles). Blood's Champion.....\$7 00 Blood's Dull Finish..... 8 00 Rough Rider..... 6 50 Electric Chopper..... 8 25 Duquesne..... 5 50 Crown..... 6 25 The above prices on axes of 3 to 4 lbs. are the base prices. 3 1/2 to 4 1/2 lbs advance 25c 4 to 5 lbs. advance 50c. 4 1/2 to 5 1/2 lbs. advance 75c.	Zinc.....80% Brass.....75% Brass plated.....75&5%
GALVANIZED	Shells, Loaded—	Boy's Handled.	BEVELS, TEE
No. 16.....per 100 lbs 2 60@ 2 70 No. 18.....per 100 lbs. 2 75@ 2 85 Nos. 20-22.....per 100 lbs. 2 75@ 2 85 No. 24.....per 100 lbs 2 85@ 2 95 No. 26.....per 100 lbs. 3 05@ 3 15 No. 27.....per 100 lbs. 3 20@ 3 30 No. 28.....per 100 lbs. 3 35@ 3 45 No. 30.....per 100 lbs. 3 65@ 3 75	Loaded with Black Powder... 40% Loaded with Smokeless Powder, medium grade.....40 & 5% Loaded with Smokeless Powder, high grade.....40 & 10 & 10%	Stanley's, rosewood handle, new list.....25% Stanley's iron handle.....25%	
POLISHED SHEET STEEL.	Winchester:	Single Bitted (handled)	BINDING, OILCLOTH.
No. 24.....per 100 lbs \$4 45 No. 26.....per 100 lbs. 4 55 No. 27.....per 100 lbs. 4 65 No. 28.....per 100 lbs. 4 75	Smokeless Repeater Grade. 40 & 5% Smokeless Leader Grade.40&10&10% Black Powder.....40%	Blood's Champion.....\$10 00 Blood's Dull Finished..... 9 00 Rough Rider..... 8 00 American..... 7 00 Perfect Premier, Forest Clipper 10 00 Duquesne..... 6 00 Single Bitted (without handles) Blood's Champion.....\$7 00 Blood's Dull Finish..... 8 00 Rough Rider..... 6 50 Electric Chopper..... 8 25 Duquesne..... 5 50 Crown..... 6 25 Double Bitted (without handles). Blood's Champion.....\$10 00 Flint Edge....." 9 75 Perfect Premier " " 11 00	Zinc.....80% Brass.....75% Brass plated.....75&5%
SMOOTH STEEL.	Gun Wads—per 1,000.	Perfect Premier, Forest Clipper	BEVELS, TEE
Wood's Smooth, No 20..... \$3 20 " " No. 22-24..... 3 25 " " No. 25-26..... 3 30 " " No. 27..... 3 35 " " No. 28..... 3 45	Winchester Gun Wads..... 15%	Duquesne..... 6 00	Stanley's, rosewood handle, new list.....25% Stanley's iron handle.....25%
PATENT PLANISHED SHEET IRON.	Winchester:	Perfect Premier, Forest Clipper	BINDING, OILCLOTH.
Patent Planished Sheet Iron, 100 lbs.....\$9 71	Smokeless Repeater Grade. 40 & 5% Smokeless Leader Grade.40&10&10% Black Powder.....40%	Duquesne..... 6 00	Zinc.....80% Brass.....75% Brass plated.....75&5%
PATENT PLANISHED SHEET STEEL.	Gun Wads—per 1,000.	Perfect Premier, Forest Clipper	BEVELS, TEE
Dickey Planished Sheet Steel.....84c	Winchester Gun Wads..... 15%	Duquesne..... 6 00	Stanley's, rosewood handle, new list.....25% Stanley's iron handle.....25%
SOLDER.	Winchester:	Perfect Premier, Forest Clipper	BINDING, OILCLOTH.
XXX Guaranteed 1/2 & 1/2...per lb. 28c Commercial 1/2 & 1/2...per lb. 27c No. 1 Plumbers.....24c	Smokeless Repeater Grade. 40 & 5% Smokeless Leader Grade.40&10&10% Black Powder.....40%	Duquesne..... 6 00	Zinc.....80% Brass.....75% Brass plated.....75&5%
SHEET ZINC.	Gun Wads—per 1,000.	Perfect Premier, Forest Clipper	BEVELS, TEE
Cask lots.....8@8 1/2c Less than Cask lots.....9@9 1/2c	Winchester Gun Wads..... 15%	Duquesne..... 6 00	Stanley's, rosewood handle, new list.....25% Stanley's iron handle.....25%
COPPER	Winchester:	Perfect Premier, Forest Clipper	BINDING, OILCLOTH.
Copper sheet..... 19c	Smokeless Repeater Grade. 40 & 5% Smokeless Leader Grade.40&10&10% Black Powder.....40%	Duquesne..... 6 00	Zinc.....80% Brass.....75% Brass plated.....75&5%

BLACKING, STOVE. (See Polish).
BLADES, SAW
Butchers'.
 Standard, 1/2 & 14-in. 35%
 Clock Spring. 35%
 Star. 15%
Hack.
 Disston's. 25&5%
 Flexible. 30%
 Star. 20&5%
Wood.
 Jackson's. per doz. \$2 25
 Disston's—No. 6, 16, 26 & 045. 4 75
 Triumph. 3 50

BLOCKS.
 Wooden. 60&10%
 Steel. 50%

Tackle.
 Iron Strapped. 70&10%
 Com. Steel. 60%

BOARDS.
Slove.
 Wabash Crystal. 50&10%
 Wabash Oriental. 50&10%
 Wabash Mosaic. 50&10%
 Wabash Aluminum. 50&10%
 Wabash Art Inlay. 50&5%
Wash.
 No. 760, Banner Globe, (singl) per doz. \$2 50
 No. 652, Banner Globe (single) per doz. 3 15
 No. 862, White Hen (glass) per doz. 3 50
 No. 800, Brass King. 3 00
 No. 172, Our Best (soap saver) per doz. 3 25
 No. 964, Royal Blue—(enamel) per doz. 3 25

BOBS, PLUMB.
Carpenters'.
 No. 2, iron. per doz. \$0 70
 No. 00. 1 30
 No. 0. 2 75
 No. 3, lead. 2 75
 No. 4. 3 40
 No. 113, brass plated. 1 10
 No. N30, nickel plat'd. 1 30

BOLTS.
Carriage, Machine, etc.
 Carriage, 1/2x6 and sizes smaller and shorter. 75&10%
 Carriage, sizes larger and longer than 1/2x6. 70%
 Machine, 1/4x4 add sizes smaller and shorter. 75&10%
 Machine, sizes larger and longer than 1/4x4. 70&10%
 Plow. 60&10%
 Stove. 80&10%
 Tire. 75%
 Wagon Box Strap. 70%
Morris, Door.
 Gem, iron. 60%
 Gem, bronze plated. 20%
Barrel.
 Cast. 60%
 Wrought. 75&10%
 Wrought, bronzed. 50&10%
Flush.
 Wrought. 50&10%
Spring.
 Wrought. 75&10%
 Wrought, heavy. 70&10%
Square.
 Cast. 50&10%
 Wrought. 70%

BORERS.
Angular.
 Miller's Falls. per doz. \$13 75
Burg.
 Enterprise Mfg. Co's No 1. 15&5%
 " " No 2. 15&5%

BOXES.
 Mail, No. 1 2 10
 Per doz. \$3.50 5.00 15.00
Miter.
 New Langdon. 15&5%
 Stanley's. 30%
 Seavey's. each, \$1 50

BRACES.
 Fray's Genuine Spofford's. 60%
 " Nos. 66 to 146. 50%
 " No. 0108. \$3 50
 " No. 08. 3 00
 " No. 010. 3 30

BRACKETS.
Hay-Rack.
 Wenzelmann's No. 1, per doz. \$9 50
 " No. 2. 10 00
Shelf.
 Cast Iron, bronzed. 50-10&5%
 Clover Wrought Steel. 75%
 Clover Folding. 65%
Wire.
 No. Crown, Self-basting, 80 doz. \$2 60

BUCKETS.
Pump, Rubber.
 Wychoff. per gro. \$4 75
 Cooper. 4 75
 Champion. 7 50
 Victor. 9 25
 Star. 5 00
 IXL. 6 75
Well.
 Galv'd Qts. 10 12 14
 Per doz. \$2.90 \$3.25 \$3.40
 Wooden, top ear, plain, per doz. 4 00
 " " swivel. 5 10

BUCKS, SAW.
 Folding. per doz. \$2 10

BURRS, RIVETING.
 Copper Burrs only. 15&5%
 Tinner's Iron Burrs only. 65&5%

BUTTS.
 Cast Iron. 70&5%
 Wrought Brass (New List). 50&10%
 Wrought Steel, Bright. 75%
 Wrought Steel, Japanned.

CALIPERS.
 Double. 35%
 Inside and Outside. 35%
 Wing. 30%

CALKS.
Logger's Boot.
 (Lufkin R. Co.'s), per M. \$3 75
Toe.
 Shoerberger. per lb 5 c
 Bessemer. 4c
 American. 7 c
 Swedes. 8c

CANS.
Milk.
 Holstein.
 Nos. 300 301 302
 Gals. 5 8 10
 Per doz. \$17.50 \$22.00 \$25.00
 Gem Pattern.
 Nos. 400 401 402
 Gals. 5 8 10
 Per doz. \$17.50 \$21.50 \$23.50
 Illinois Pattern.
 Nos. E. 2 E. 3
 Gals. 8 10
 Per dozen. \$23.50 \$26.50
 Jersey Pattern.
 Nos. 80 81
 Gals. 8 10
 Per doz. \$23.00 \$27.00

CAN OPENERS.
 See Openers.

CAPS, GUN.
 See Ammunition.

CARPET STRETCHERS.
 See Stretchers.

CARRIERS.
Hay.
 Diamond, Regular. each, \$3 85
 Diamond, Sling. 7 00
 Myers' Imperial. 3 85
 Myers' Clover Leaf. 4 00

CARTRIDGES.
 See Ammunition.

CASTERS.
 Standard—Ball Bearing. 50&10%
 Bed. 60&5%
 Common Plate.
 Brass Wheel. 60&10%
 Iron and porcelain wheels, new list. 60&5%
 Philadelphia Plate, new list. 60%
 Martin's. 60%
 Payson's. 75&10%

CATCHERS, GRASS.
 Carroll's, No. C. per doz. \$4 25
 Wildermuth's.
 Nos. 1 2 3
 Per doz. \$5.60 \$5.75 \$6.25
 Nos. 4 5 6
 Per doz. \$9.75 \$9.50 \$10.00

CHAIN AND CHAINS.
Breast Chains.
 Doubleslack. doz. pairs, \$5 75
 With Covert Snaps. 5 00
 With Slide. 3 25
 Without Slide. 2 85
Bright Ox Chains.
 1/2-in. \$7.25; 3/4-in. \$5.45 per 100 lbs.
Cable Coil Chain.
 Inch. \$1.00 \$1.10 \$1.20
 Per 100 lbs. \$10.80 \$8.00 \$7.00 \$6.20
 Inch. \$1.10 \$1.20 \$1.30
 Per 100 lbs. \$8.00 \$5.90 \$5.75 \$5.65
 Inch. \$1.20 \$1.30 \$1.40
 Per 100 lbs. \$5.55 \$5.55 \$5.55

Cable Log Chain.
 Advance 25c per 100 lb. on Cable
 Coil.
 Coil Chain.
 American-Weldless. 45%
 Niagara. 60&10%
Cow Tie Chains.
 American Coil. 45%
 " 2 toggle. 40%
 " toggle and snap. 40%
 " open and closed ring. 40%
 Eureka Special—No. 2/0. 78
 " No. 3/0. 90
 Niagara Cow Ties. 60&10%
Halter Chains.
 American, new list. 45%
 Dog leads. 40%
 Kennel chains. 40%
 Niagara halters. 60&10%
 " dog leads. 60&10%
 " coil. 50&5%
 " kennels. 50&5%
Hammock Chains.
 Oneida. 50%
Picture Chains.
 Light Brass, 3 ft. per doz. \$0 60
 Heavy Brass, 3 ft. 1 00
Pump Chain
 Galvanized, per 100 lbs. \$5 50
Safety Chain.
 Brass. 60%
Sash Chains (not per 100 feet.) Bright finish.
 No. 80. \$1.05
 " 100. 1.20
 " 130. 1.40
 " 250. 2.10
Coppered finish.
 No. 80. 1.15
 " 100. 1.25
 " 130. 1.45
 " 250. 2.15
Community Galvanized.
 No. 80. 1.35
 " 100. 1.50
 " 130. 1.75
 " 250. 2.50
Community Galvanized, Hercules finish.
 No. 80. 1.70
 " 100. 1.85
 " 130. 2.10
 " 250. 2.90
Special Steel Loading Chain.
 Inch. \$16.00 \$13.50 \$12.50
 Per 100 lbs. \$16.00 \$13.50 \$12.50
Stretchers Chains.
 1/2-in. \$8.50; 3/4-in. \$7.75 per 100 lbs.
Tie-Out Chains.
 American. 75%
 Brown's. 70&5%
 Eureka. 85&10&5%
Trace Chains.
 Western Standard.
 6-2. per pair 30c
 8-2. 34c
 8-3. 33c
 10-2. 38c
 Add 2c per pair for Hooks.
 Add 2c for Twist Link.
Wagon Stay Chains.
 Inch. \$6.50 \$6.00 \$5.50
 Per 100 lbs. \$6.50 \$6.00 \$5.50

CHALK, CARPENTERS'.
 Blue. per gro. 80c
 Red. 70c
 White. 60c
 Common White School 11c
 Crayon. 11c

CHARCOAL.
 In bags. per bag 95c

CHECKS, DOOR.
 Blount. 25%
 Sargent's. 25%

CHIMNEY TOPS.
 Iwan's Volcano. 50%

CHISELS.
Box.
 Inches. 10 12 14
 Round per doz. \$3.00 \$3.50 \$3.80
 Flat 4.00 4.75 5.25
Cold.
 Good quality, 1/2 in. and larger. per lb. 13c
 Smaller size per doz.
 Socket, Framing and Firmer. 75&10%
 Clover 75&10%
 Tanged, Firmer. 20%
 With handles. 20%
Choppers, See Cutters, Meat.
CHUCKS, DRILL.
 Goodell's, for Goodell's Screw Drivers. per doz. \$6 25
 Yankee, for Yankee Screw Drivers. 5 00

CHURNS.
 Anti-Bent Wood,
 Gal. 5 7 10
 Each. \$3.90 \$4.60 \$4.85
 Belle, Barrel. 65&71%
 Common Dash, Gal. 4 5 6
 Per doz. \$0.00 \$10.00 \$10.80
 Union, Gal. 5 7 10
 Each. \$3.75 \$4.25 \$5.40

CLAMPS.
Adjustable.
 Martin's. 30%
Carpenters'.
 Steel Bar. 25%
Hose.
 Sherman's, brass, 1/2-in., per doz. 42c
 Double brass, 1/2-in., 90c

Saw Filers.
 Disston's list, \$30.00. 30%
 Stearns', No. 0. \$3.50; No. 1. \$11.50; No. 3. \$5.00 doz.
 Wentworth's, No. 1, \$6.25; No. 3 \$8.75.

CLAWS, TACK.
 Cast, wood hdl. per doz. 45@60c
 Forged steel, wood hdl. \$0.80
 Solid steel. 1 00
 Giant. 50

CLEANERS.
Drain.
 Iwan's Adjustable. 55%
 Iwan's Stationary. 40&5%
Pot.
 Wire. per doz. \$0 75
Side-Walk.
 Steel. per doz. \$3 25
 XLCR. 65&5%

CLEAVERS
Family.
 Griffin, Inch. 6 7 8
 Per doz. \$5.50 \$5.75 \$6.25
 Royal. per doz. 2 25
Butchers.
 Plumbs. 25%

CLEAVISES
 Malleable. 6c lb.

CLIPPERS.
 Bolt. \$1.90@4.75

CLIPS.
 Axle. 65&5%
Damper.
 Standard. per doz. 65c
 Troy. 38c
 Hame. 17

CLOTH
Emery.
 Star. 50%
 B. & A. 50%
Hardware Wire—full rolls (100 ft.)
 2 to 3 incl., Galv.—in full roll. 3 00
 4 and 5. 3 25
 6. 3 50
 7 and 8. 4 00

Screen Wire.
 12 mesh, painted per 100 sq. ft. 1 34

COCKS AND FAUCETS.
 Compression Plain Bibbs. 60, 10&5%
 Lever Bibb Cocks. 60, 10&5%
 Compression Hose Bibbs. 50-10&5%
 Telegraph Faucets (new list). 50-5%
 Racking Cocks (new list). 60&10&5%
 Compression Lock C's (new list). 70%
 Andrew's Brass Faucets. 70%
 Angle Plug Faucets, per doz. \$0 85
 Milk Can Faucets, per doz. \$2.00-4.20
 Petroleum Faucets. 70%

COLLARS, STOVE PIPE.
 Inches. 5 6 7
 Plain Tin. per gro. \$1.90 \$2.40 \$3.50
 Japanned Tin 3.00 3.50 4.25
 Lacquered Tin 3.60 4.20 4.80

COMBS, CURRY.
 Nos. 000 11 15 39 89 108
 Per Doz. \$.37 .60 1.90 .90 1.15 .80
 Nos. 299 320 390 532 620 1400
 Per Doz. \$1.05 .85 1.35 1.20 .75 1.40

COMPASSES.
Carpenters'.
 Pencil—Faber's. per doz. \$1.00

COPPER—See Metals.

COPPERS.
Soldering.
 1 lb. per lb 30c
 1 1/2 lb. 28c 2 lb. 25c
 3 lb and larger. 24c

CORD.
Picture
 White Wire (new list) 85%
Sash.
 Monarch Braided Flax. per lb
 Silver Lake, white, 7-32 in. 36c
 Silver Lake, white, 8-32 in. 25c
 Keystone. 8-32 in. 24c

CORKSCREWS.
 Walker's. 331%
 Williamson's Regular. 40&10%
 Williamson's Forged Worm. 50%

COTTERS, SPRING.
 All sizes—new list. 90%

COUPLINGS, HOSE.
 Brass. per doz. \$1 00
 Brass Plated. 85

COVERS, WAGON—See Tents.

CRADLES, GRAIN.
 Morgan's Grapevine. per doz. \$22 25

CRAYONS—See Chalk.
CROW BARS.
 Inch or Wedge Point..... per lb 3c

CUTTERS.
Glass.
 Red Devil.....45%
 Smith & Hemenway Co.....50%
 Woodward.....40%

Meat.
 Enterprise, Nos. 5, 10, 12, 22,
 32 and 42.....25%
 No. 202, list, \$1.50 ea.....40&71%

Pipe.
 Stanwoods No. 1 2 3
 Each.....\$0.85 \$1.50 \$4.00

Slaw and Crowt.
 3-knife Crowt..... per doz. \$11 50
 1-knife Slaw..... " 1 75
 2-knife Slaw..... " 2 50
 Washer..... " 7 75

DAMPERS, STOVE PIPE.
 Jewel.....50&10%
 American.....50%

DIES AND STOCKS.
 Discount.....40%

DIGGERS.
Post Hole.
 Acme..... per doz. \$0 25
 Atlas..... " 9 00
 Eureka..... " 8 00
 Hercules..... " 10 25
 Iwan's Split Handle..... " 7 50
 Iwan's Perfection..... " 9 00
 Iwan's Hercules pattern..... " 10 00
 Ryan's..... " 17 00
 See also Augers—Post Hole.
 Dividers, Wing.....65&10%

DOOR CHECKS—See Checks.

DOORS, SCREEN.
 1/2 in. 4-panel, painted... per doz. \$7 93
 1 1/2 in. 4-panel painted... " 9 50
 1 1/2 in. 3-panel, natural pine,
 fancy..... " 12 40

DOOR HANGERS—See Hangers.

DRILLS.
 Bit Stock.....60&10%
 Blacksmith's Twist.....60%
 Breast.
 Fray's No. 9..... each, \$1 75
 Millers Falls No. 12..... " 2 10

Hand.
 Goodell's Automatic.
 Nos. 01 03 3 20
 Per doz. \$7.75 \$11 50 \$12.50 \$11.00
 Goodell's Single Gear, per doz. 15 75
 Millers' Falls " 12 75
 " " Double " 15 25

Reciprocating.
 Goodell's..... per doz. 16 59

Bit Stock.
 Standard List... 60&5% @60% @10

DRIVERS, SCREW.
 Standard.....65&10%
 Lock Ferrule.....60%
 Champion.....50%
 Champion Pattern.....70%
 Clark's Interchangeable.....30%
 Edison.....60%
 Reed's Lightning.....45&5%
 Goodell's Spiral.....50, 10, 5&24%
 Yankee Ratchet.....50%
 " " Spiral.....50&10%
 Smith & Hemenway Co.....40&5%

EAVES TROUGH, GALVANIZED
 Terms, 2% for cash. Factory shipments generally delivered.
 See also conductor pipe and elbows.

EGG BEATERS—See Beaters.

ELBOWS.
Adjustable Stove.
 Inches..... 5 6 7
 Smooth, per doz. \$0.75 \$0.85 \$1.20
 Plan'd, " 2.00 2.25 2.90

Corrugated Conductor.
 Discount.....75&10%

Corrugated Stove.
 Inches..... 5 6 7
 Smooth, per doz. \$0.75 \$0.90 \$1.30
 Pol'd, " 1.40 1.65 2.35
 Plan'd, " 2.25 2.90 3.75

Four-Piece Stove.
 Inches..... 5 6 7
 Smooth, per doz. \$0.60 \$0.65 \$0.95
 Planished, " 1.75 1.95 2.55

EMERY CLOTH—See Cloth.

EMERY TURKISH.
 Size.....5-lb. pkgs. 1 kegs, kegs.
 No 60 to 150, per lb. 6c 4c 4c
 Flour..... " c 3c 3c

ENAMEL, IRON.
 A-B Iron Enamel, 3 doz. case,
 Peerless..... per gro., 15 00
 Peerless..... 1 25

EXTRACTORS, PIG.
 See Forceps, Pig

EYES.
 Bright Wire Screw—See Goods, B. W.
 Drifting Pick.....00, 10&5%
 Hooks and—
 Brass.....85&10%
 Iron.....90%

FASTENERS, STORM SASH.
 Schroeder's..... per doz. \$0.85
 Sensible..... 1 15

FAUCETS—See Cocks.

FILES AND RASPS.
 Delta.....70%

Nicholson's—
 American.....75&10%
 Arcade.....75&10%
 Black Diamond.....70&10%
 Eagle.....75&10%
 Great Western.....75&10%
 Kearney & Foot.....75&10%
 McClellan.....75&10%
 Nicholson.....70&10%
 J. Barton Smith.....75&10%
 X-F Swiss Pattern.....40&10%

Simonds.....70%
 Disston's.....75&10%
 Heller's.....70%

FLUE STOPPERS—See Stoppers.

FORCEPS, PIG.
 Superior..... per doz. \$4 75
 Whisson's Imp..... 5 25

FORKS.
 Barley.
 Steel New List.....65&10%
 Wood, 4-times, per doz..... \$5 00

Hay.
 2-time.....60%
 3 ".....60%
 4 ".....60&10%
 Digging.....65&5%
 Scoop.....30%

Header.
 3-time.....60&5%
 4 ".....60&5%

Manure.
 4-time.....60%

FREEZERS, ICE CREAM.
Arctic.
 Qts..... 1 2 3 4 6
 Each. \$1.10 1.30 1.50 1.80 2.30
 Qts..... 8 10 12 15 15
 Each.....\$2.95 3.80 4.50 5.20

White Mountain.
 Qts..... 1 2 3 4 6
 Each. \$1.25 1.60 1.90 2.20 2.80
 Qts..... 8 10 12 15 20
 Each. \$3.60 4.65 5.85 7.00 9.00

Jack Frost.
 Qts..... 2 3 4 6 8 10
 Price \$1.60 1.90 2.20 2.80 3.60 4.65

Polar Star.
 Qts..... 1 2 3 4
 Each. \$0.75 1.00 1.50 2.00

GAUGES.
 Butt and Rabbit.
 Cream Pal.
 Fairmont..... per doz. \$3 75
 Marking, Mortise, etc.....50&10%

Saw.
 Wire.
 Disston's.....25%

GIMLETS.
 Discount.....35&40%

GLASS, WINDOW.
 Single.....90&20%
 Double.....90&25%

GLASSES, LEVEL.
 3-inch..... per doz. \$0 70
 2 1/2-inch..... 65

GLUE.
 Bulk.
 B Amber..... per lb. 18 c
 A White..... 18 c
 H. S. Amber..... 16c

Liquid.
 Army & Navy.....4c
 Le Page's—
 List "A".....37 1/2%
 List "B".....31 1/2%
 List "C".....25%

GOODS.
 Bright Wire.....90%

GREASE, AXLE.
Wood Boxes.
 Diamond..... per gro. \$5 50
 Frazer's..... 9 50
 Hub Lightning..... 5 25
 Paragon..... 6 75

Wood Pails.
 Frazer's, 15 lb. 80c; 25 lb. \$1.30 each.
 Hub Lightning, 15 lb. 55c; 25 lb.
 70c each.

Tin Cans.
 Chamellene Graphite.
 1 lb. per gross.....\$9 50
 3 lb. per gross.....25 00
 5 lb. per gross.....37 00

GRIDDLES.
 Soapstone.....33 1/2%

GRINDSTONES.
Family.
 Inches..... 6 8 10
 Per doz.....\$7.25 9.75 12.00

Loose.
 Per ton.....\$22 00@23 00

Mounted.
 Ball Bearing..... 1 2 3
 Each.....\$3.75 3.60 3.35
 Common Bearing..... 1 2 3
 Each.....\$3.35 3.15 3.00

GUN WADS
 (See Ammunition.)

HAFTS, AWL.
 Brad.
 Common..... per doz. \$0 19

Peg.
 Common..... " 22
 Patent, plain top..... " 47
 Patent, leather top..... " 52

Sewing.
 Common..... " 22
 Patent..... " 52

HALTERS.
 Jute Rope..... per doz. \$1 10
 Sisal Rope..... " 1 85
 Web..... " 2 00
 Leather, rope tie..... " 8 50
 Leather, leather tie..... " 11 50

HAMMERS, HANDLED.
 Blacksmiths' Hand.....50&10%
 Engineers.....50&10%
 Farriers.....40&10%
 Machinists.....60&5%
 Nail.
 Quaker City..... per doz. \$3 85
 Cast..... 1 15
 Maydole's.....30&5%

Riveting.
 40%

Shoe.
 Cast..... per doz. \$0 95

Tack.
 All Iron..... per doz. \$0 35
 Pol'd Iron, Hickory hdl. " 50
 Mall, Iron, Inlaid..... 1 55
 Magnetic..... 1 2 3
 Per doz.....\$0.70 .80 1.00
 Magazine..... per doz. 4 75

HAMMERS, HEAVY.
 Heavy Hammers and Sledges.
 Under 5 lbs.....80%
 5 lbs. and over.....80&10%

Masons'.
 Single and Double Face.....70&10%

Auger.
 Common Assorted..... per doz. \$0 55
 Pratt's Adjustable, Nos. 1 & 2,
 per doz..... 4 75
 Ives' Adjustable..... per set, 1 35
 Aze.....35%

Chisel.
 Hickory, Tanged Firmer, Assorted,
 3c; Large, 38c per doz.
 Hickory, Socket Firmer, Assorted,
 2c; Large, 30c per doz.
 Applewood, Tanged, Firmer, As-
 sorted, 34c; Large, 42c per doz.
 Applewood, Socket, Firmer, As-
 sorted..... per doz \$0 10
 Coal Pick.....40%
 Drifting Pick.....40%
 File, assorted, 13c; Large, 16c per doz.
 Hammer.
 Adze Eye..... per doz. 36 to 75c
 Blacksmiths'..... " 40c@75c
 Machinists'..... " 45c@80c

Hatchet.
 Hay and Manure Fork.....35%
 Hoe and Rake.....35%
 Plain..... per doz. \$0 75
 Varnished..... " 80

Screw Driver.
 Assorted..... " 37
 Large..... " 48

Shovel and Spade.
 35%

HANGERS.
Barn Door.
 U. S. Rolled Bearing.....60&10%
 Matchless.....50&10%
 Storm King.....60%
 World's Best.....50%
 Wagner's Adjustable.....70&10%
 Warehouse Big Twin.....25%

Conductor P.
 Iwan's Perfection.....50%

Eave Trough.
 Baker's..... per gro. \$2 35
 Imperial.....20%
 Wire.....33 1/2%

Parlor Door.
 Acme..... per set, \$3 75
 Ives' Improved..... " 2 60
 Lane's Standard..... " 3 50
 Lane's New Model..... " 3 10
 Le Roy Noiseless..... " 4 00
 Richards'.....40-10%

HASPS.
 Hinge, Wrought.....40%
 With Staples—See Staples.

HATCHETS.
 Crescent.....50&10%
 Cast Claw..... per doz. \$1 10@1 35
 Cast Shingling..... " 1 25
 Germantown.....30%

HAY KNIVES.
 See Knives.

HAY RACK BRACKETS.
 Wenzleman's No. 1..... per doz. \$0 00
 Wenzleman's No. 2..... " 9 60

HINGES.
Blind.
 Clark's Gravity.. per doz. sets, \$1 05
 Parker's.....65%
 Shepherd's Noiseless, for Wood
 Casing..... per doz \$1 05

Gate.
 Clark's..... 1 2 3
 Hgs & Ltch. doz. \$2.50 3.25 4.25
 Hinges only... " 2.00 2.50

Latches only. " 00 90
 Knuckle..... per doz. prs. \$6 00
 Leed's..... sets 6 75
 Superior..... " prs. 9 50

Spring.
 Bommer.....50%
 Chicago.....25&5%
 Columbia Dbl. Acting...40&10&5%
 Gem.....25%
 Ideal Detachable..... per gro. \$11
 Matchless.....40%
 New Idea..... per gro. \$7 20
 Oxford.....20%

Wrought Iron
 New Lists
 Light Strap Hinges.....70&10%
 Heavy Strap Hinges.....75%
 Light T Hinges.....60%
 Heavy T Hinges.....45%
 Extra Heavy T Hinges.....70%

Screw Hook and Strap.
 6 to 12 in..... per 100 lbs. \$4 25
 14 to 20 in..... " " 4 00
 22 to 36 in..... " " 3 75

Screw Hook and Eye
 1/2 in..... per 100 lbs. \$6 75
 1 in..... " " 7 75
 1 1/2 in..... " " 9 75

HOES.
 Garden.....70&10%

Grub.
 Extra.....70%
 Hazel..... per doz. \$5 00
 Ladies' and Boys'.....70%
 Mortar.....75&10%
 Planter's Eye.....62 1/2%
 Weed.....70&10%

HOLLOW WARE—See Ware.

HOOKS.
And Eyes.
 Brass.....60%
 Iron.....70%
 Awn'ng..... per gro. 80&10%

Belt.
 Brown's.....70&5%
 Jones'.....65&5%
 48

Bench.
 See Stops, Bench.

Box.
 Inch.....
 Per doz.....
 Humason &
 (See G
 Bush.
 Common A
 Chain.
 Inch.....
 Per 100.....
 Clothes Line
 Galvanize
 Coat and H
 Cast Iron
 Gem Wire
 Conductor.
 Malleable.
 Wrought.
 Corn.
 Common,
 red.....
 Little Gias
 Gate.
 See Goods
 Grass.
 Common.
 Per doz..
 German..
 Gypsy..
 Hammock.
 With plat
 With scre
 Lambrequin
 Picture..
 Potato and
 Screw..
 Brass..
 (See G
 Seat Spring
 Elastic...
 H
 Velvet, 3 p
 Eclipse,
 Diamond
 Geneva
 Illinois
 COTTON
 High Grade
 Special
 Leader
 Boss.
 Nos..
 Per doz..
 Nos..
 Per gro..
 Nos..
 Per gro..
 Nos..
 Per doz..
 Brinkerhoff
 Per gro..
 See Metals.
 Curling.
 C.....
 B.....
 A.....
 Princess.
 Thelma..
 Pinking..
 Plane.
 Wood Be
 Sad.
 Charcoal.
 Common,
 No. 70
 No. 100
 Common,
 Chinese P
 Laundry,
 70%
 Mortar.....75&10%
 Mrs. Pott
 No. 50
 No. 55
 No. 50
 No. 55
 No. 55
 Tailors' S
 Tailors' C
 Tuycere.
 Single Du
 Double D
 Sutton..
 Locomotive
 Wagon..
 Miller..
 Oliver..
 Nos..
 Each..

Table listing various hardware items such as Box, Bush, Chain, Clothes Lines, Coat and Hat, Conductor, Corn, Gate, Grass, Hammock, Lambrequin, Picture, Potato and Masure, Screw, Seat Spring, HOOPS, TUB, HOSE, GARDEN, COTTON COV. RUBBER HOSE, HUSKERS, IRON, IRONS, JACKS, and Wagon.

Table listing various hardware items such as Standard, Wilcox, KETTLES, KNIVES, Drawing, Hay, Hedge, Mincing, Putty, Scraping, KNOBS, LADDERS, LANTERNS, LEADERS, CATTLE, LEATHER, LACE, LEATHERS, PUMP, LIFTERS, LINES, and Clothes.

Table listing various hardware items such as LINING, STOVE, MACHINES, Leather Riveting, Washing, MAIL BOXES, MALLETS, MATS, MATTOCKS, MAULS, MEASURES, MILLS, COFFEE, MITRE BOXES, MOPPS, MOWERS, LAWN, NAILS, and Wire.

Table listing various hardware items such as NAIL PULLERS, NAIL SETS, NETTING, POULTRY, NIPPERS, NOZZLES, NUTS, HOT PRESSED, OILERS, OPENERS, OUTFITS, COBBLING, PADLOCKS, PAILS, PANS, and Paper.

PARERS.

Apple.
 Bay State.....per doz. \$13 00
 Turntable....." 7 00
 White Mountain....." 5 00
 Reading....." 7 00

Potato.
 Goodsell's Saratoga, 10 1/2 in., doz. 6 50
 Goodsell's Saratoga, 5 in., doz. 5 50

PICKS.
 Adze Eye Ore..... 70&10%
 Drifting and Poll Picks..... 70%
 Plumbs, Railroad..... 70&10%
 Surface..... 70%

PINCERS.
 Carpenters', cast steel,
 Inches..... 6 8 10 12
 Per doz. \$2.00 2.00 2.95 3.75
 Blacksmiths'..... 45%
 Heller's..... 40%

PINS.
Clothes.
 Common.....per box of 5 gro. \$0 52
 Hoyt's....." 31
 U. S....." 70

Picket.
 Fluted, 15-in.....per doz. \$1 00
 Fluted, 21-in....." 1 60
 Spiral....." 1 00

PIPE.
Conductor. Gal. Steel Charcoal
 L. C. L. to Dealers:—
 Eastern.....70&10%...50&10&2 1/2%
 Pittsburgh.....75&10&5%...10%
 Central.....75&10%...60%
 Northwestern.....75&7 1/2%...60%
 Western.....70&12 1/2%...50&12 1/2%
 Tennessee.....70&10%...50&12 1/2%
 Southern.....70%...50&12 1/2%
 Southwestern.....70%...50&5%
 Terms 60 days; 2% Cash 10 days.
 Factory shipments generally delivered.

Lead.
 Full coils.....per lb. 7 1/2c
 Cut coils....." 7 1/2c

Stove.
 Acme—Inches... 5 6 7
 Smooth, per jt. 8 c 8 1/2c 10 c
 Planished, " 30 c 31 c 38 c
 Peerless—Smooth, 7 1/2 c 8 c 9 1/2c
 Polished.....14 1/2c 15 1/2c 18 c
 Planished.....28 c 31 c 35 1/2c
 Made-up—Inches. 5 6 7
 Smooth..... 7 1/2c 8 c 9 1/2c
 7 to 6 in. Smooth Tapers, pr jt. 11c
 6 in. Smooth T's..... 27c
 7 to 6 in. Planished Tapers..... 45c

Yale Patent Lock Pipe—Stove.
 7" 6" 7" 7" to 8"
 Battle Axe Blue... 7 7 1/2 9 1/2 10 1/2
 Can't Slip " 7 1/2 8 1/2 10 11
 Peerless " 7 1/2 8 1/2 10 11
 Duplex " 10 11 13 14
 Yale, Rus. Fin. " 15 16 17 18
 Duplex Planished. 29 31 37 38
 Galvano, Gal. " 15 16 17 18
 If wasted made up, add per joint or grooved, 1c; riveted, 1 1/2c. Grating made-up pipe extra.

Wrought Iron Gas Pipe.
 1/2 @ 1/2 in., black.....discount, 60%
 1/2 @ 1/2 in., black....." 60, 10&5%
 1/2 in. to 6 in., black....." 70%
 7 in. to 12 in., black....." 62 1/2%
 1/2 @ 1/2 in., galvanized....." 42%
 1/2 @ 1/2 in., galvanized....." 50%
 1 in. to 6 in., galvan'd " 57 1/2%
 7 in. to 12 in., galvan'd " 45%

PLANES.
 Sargent Iron Bench.....60%
 Stanley Iron Bench.....Nets

PLATES, TIN.
 See Metals in Column 1.

PLIERS.
 Giant, Button's—80% off list.
Cutting
 Bernard's.....30%
 Lodi.....50%
Upper End and Diagonal Cutting
 Swedish Side.....70%
 Utica Drop Forge & Tool Co.....60%
Fencing.
 Black Bull.....per doz. \$8 25
 Farmers' Choice.....per doz. \$8 00
 Russell's....." 8 25

Flat and Round Nose.
 Bernard's.....30%
 German.....65%
 Lodi.....50%
 Paragon.....50%
Gas.—Inches.. 7 8 10 12
 Per doz. \$3.00 3.50 4.50 5.50

Tinners'.
 Hollow.....40%
 Solid.....each, 5 1/2c

PLUMBS AND LEVELS
 Common.....Nets
 Cook's.....40%
 Davis' Iron.....25%
 Davis' Inclinometer.....15%

POINTS
 Drive Well Points.....75&5%

POKERS, STOVE
 Wr't Steel, str't or bent, per doz. \$0 55
 Wr't Steel, wood hand'ls " 80
 Nickel Plated, coil hand'ls " 65

POKES, ANIMAL
 Cracker Jack, wr't steel, per doz. \$4 50

POLISH.
Meta.
 Black Silk, No. 70, 1-pt. cans, per doz. \$2 25
 Black Silk, No. 00, 6-oz. cans, per doz. 1 00

Shoe.
 M. C. D.....per doz. 30c@50c
 F. C. O....." 40c
 T. M....." 55c@1 75
 Imperial.....per gro. 5 00

Stove.
 Black Eagle, 1-lb. cans, pr. gr. \$15 00
 Black Silk—
 5-lb. pail.....\$0 70
 Paste, 5-oz. cans.....per doz. 75
 Paste, 1-lb. cans....." 1 00
 Liquid, 1/2-pt. cans....." 1 00
 Liquid, 6-oz. cans....." 75
 1/2 pt. Air Drying Iron
 Enamel....." 1 25
 Black Jack, 1-lb. cans....." 9 25
 Dixon's Carb. of Iron....." 5 75
 Nickel Plate....." 4 50

POPPERS, CORN.
 Round or Square, 1-qt. per doz. \$1 00
 Square, 2-qt....." 1 60
 4-qt....." 3 00

POTS, FIRE.
 Clayton & Lambert's, each, \$4 75@6 25
 Gate City.....each, 6 25
 Gem.....each, \$6 75@8 50

POWDER.
 See Ammunition.

PRESSES, FRUIT AND JELLY.
 Enterprise Manufacturing Co.....25%

PRIMERS
 See Ammunition.

PRUNERS.
 Disston's Pole.....per doz. \$6 50
 Henry's Improved....." 75&10%
 Water's Improved....." 80%

PULLERS.
Cork.
 Daisy.....each, \$3 10
 Phoenix....." 1 40
 Quick and Easy....." 2 70

Nail.
 Giant.....per doz. 10 80
 Giant Pattern....." 9 00
 Jumbo....." 9 00
 Tack—Giant....." 40

PULLEYS.
 Awning—Jap'd.....60%
 Clothes Line.....50&10%
Hay Fork.
 Iron Wheel, 5-in.....per doz. \$1 75
 Wood Wheel, 6-in....." 1 80
 Wood Wheel, 6-in., pass knot, per doz. 2 55
Hot House—Jap'd.....50&10%
 Screw—Jap'd.....60%
 Side—Jap'd.....50&10%
Sash.
 Common.....per doz. \$0 18
 Common-Sense, 2-in....." 20
 Empire Pattern, 2-in....." 20
 Ideal....." 20
 Steel....." 25

PUMPS.
Pitcher Spout.
 Nos.....1 2 3 4
 Each.....\$1.00 1.15 1.30 1.70

Spray.
 Blizzard.....per doz. \$14 50
 Cyclone, tin....." 3 40
 Cyclone, copper....." 6 75
 Daisy....." 9 00
 Little Giant.....each, 2 25

PUNCHES.
Conductors'.
 No 22.....per doz \$2 25
 Machine.....per lb 19

Saddlers'.
 Common.....per doz 60c@70c
 Good....." 72c@84c

PUTTY.
In Bladders.
 Strictly pure.....per 100 lbs. 3 00

RAIL.
Barn Door.
 Matchless, 1-in.....3 c
 Matchless, 1 1/2-in.....3 1/2c
 Storm King.....4 c

Sliding Door.
 Painted steel.....per ft. 4 1/2c
 Bronzed wrought iron...per ft. 8 1/2c

RAKES.
 Coal or Wood.....per doz. \$5 20
Garden.
 Steel.....70%
 Steel, bow.....70%
 Malleable iron, heavy.....60&10%
Hay.
 Wood.....\$1 80@2 00
Lawn—Wood.
 XXX.....per doz. \$3 00
 Automatic....." 5 25
 Lawn Queen....." 2 75
 Jumbo, 36 teeth....." 6 00

RASPS—See Files.

RAZORS.
 Bo-ras-ic.....50%
 Red Devil.....50%
 Tree Brand.....50%

REGISTERS.
 (All Sizes)
 Japanned, Bronzed and Plated..75%
 White Porcelain Enameled....75%
 Solid Brass and Bronze Metal...40%
 Single Valve (Baseboard and Sidewall)...70%

REGISTER FACES
 Japanned, Bronzed and Plated
 4x6 to 14x14.....75%
 14x14 to 38x42.....75%
 Heavy Round Gratings.....75&10%
 White Porcelain Enameled...50&10%
 Solid Brass or Bronze Metal....40%

Ring.
 Copper.....2 1/2 in. 3 in.
 Per doz.....\$1 60 \$2 00
 Rea's Improved Self-Piercing copper, pr doz 2 00
 Steel, per doz.....90 1 00
 Nickel plated.....1 35

and Ringers—Hog.
 Blair's Rings.....per doz. \$0 58
 Blair's Ringers....." 75
 Brown's Rings....." 50
 Brown's Ringers....." 80
 Champion Ringers....." 1 60
 Hill's Ringers....." 70
 Hill's Ring, boxes....." 55
 Major Rings....." 60
 Perfect Ringers....." 1 20
 Wolverine Rings....." 1 40
 Wolverine Ringers....." 80

Fruit Jar.
 White.....per lb.30c

Key.
 Split, round.....per doz. \$0 17
 Split, square....." 32
 Ball, round....." 40

RIVETS.
and Burrs.
 Copper Belt.....40&10%
 Coppered Iron.....60&10&5%
 Tinners'.....70%
 Hame.....per lb. \$0 10
 Slotted Clinch per doz 40c@45c
Tubular
 Nos 1 and 2 assorted sizes, doz, 45c

RIVET SETS
 See Sets.

ROPE.
Cotton.
 1/2, 5-16 in Com on reels...per lb. 11 1/2c
 1/2, 5-16 in Com. in coils. " 12 c
 1/2, 5-16 Imperial in coils. " 21 c

Sisal.
 1st Quality.....9 c
 Hardware Grade, rates, per lb. 8 c
Pure Manila.
 1st quality.....per lb. 10 c
 Hardware Grade, rates... " 9 c

RULES.
 Boxwood.....Nets
 Ivory.....Nets

SASH WEIGHTS.
 See Weights.

SAWS.
Back.
 Atkins'.....30%
 Disston's.....25%
 Jackson's.....25%

Butchers'.
 Atkins'.....40&10%
 Disston's.....30%

Circular.
 Atkins'.....50%
 Disston's.....50%
 Hiles'.....50&10%
 Simonds.....50%

Compass.
 Atkins'.....35%
 Common.....per doz \$1 35@1 60
 Disston's.....25%

Cross-Cut
 Atkins'.....35%
 Disston's.....45%
 Simonds.....30%

Dehorning.
 Atkins'.....per doz. \$5.75
 Disston's.....per doz. \$5 75

Grooving
 Atkins'.....50%

Hack.
 Atkins'.....30%
 Disston's.....25%
 Simonds.....50%
 Star.....25%

Hand and Rip.
 Atkins'.....35%
 Disston's No. 7.....30%
 Disston's Nos 8, D8, 12, 76, 112, D100 and 120 (new list).....25%
 Keystone.....30%
 Enterprize, hand.....per doz. \$5 00
 Our Saw, hand....." 4 00
 Our Saw, rip....." 4 50

Keyhole—Disston's.....25%
 Atkins'.....35%

Narrow Band
 Atkins'.....50%
 Simonds.....30%

One Man.....50%
 Atkins'.....50%

Panel
 Atkins'.....35%
 Disston's No. 7.....30%

Pruning.
 Atkins'.....30%
 Disston's.....25%

Rip.
 Atkins'.....50%
 Simonds.....45%

Wood
 Common.....per doz. \$4 50
 Clover Leaf....." 6 00

SAW BUCKS—See Bucks.
SAW SETS—See Sets.
SAW TOOLS—See Tools.
SAW FRAMES.
 Common, plain.....per doz. \$1 25
 Common, painted....." 1 70

SCALES.
Counter.
 Pelouze.....40&10%
Platform.
 Osgood.....50%

SCOOPS.
Grain.
 1/2-bu. "Hercules".....per doz. 13 70
 1-bu. "Hercules"....." 15 00

SCRAPERS.
Box.
 Triangular.....per doz. \$4 00

Cabinet.
 Cast Steel.....per doz, 60c@75c

Road.
 Cubic ft. 7 5 3
 Without run's, ea. \$4.00 3.75 3.50
 With runners, ea. 4.25 4.00 3.75

SCREWS.
Bench.
 Iron, in.....1 1 1/2 1 1/4
 \$1.50 4.00 5.00
 Wood, white maple.....per doz. \$3 50
Hand—Wood.....70% new list
Hand Rail.....70-10%
Jack.....70-10%
Lag or Coach—all sizes, gimlet pointed.....75%
Saw—Centennial.
 Nos.. 1 2 3 4 5 6
 Per doz. 18c 20c 20c 30c 23c 25c

Wood.
 F. H. Bright.....87 1/2&5&10%
 R. H. Blued.....85&5&10%
 F. H. Jap'd.....82 1/2&5&10%
 F. H. Brass.....80&5&10%
 R. H. Brass.....77 1/2&5&10%
 R. H. Nickel Plated.....77 1/2&5&10%

SCYTHES.
 Be Ve Be, grass.....per doz. \$8 00
 Clipper, grass....." 8 25
 Clover Leaf Dutchman....." 7 50
 Honest Dutchman....." 7 50
 Be Ve Be....." 7 50

SHAVING SETS
 Smith & Hemenway.....60%

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SETS. Nail. Round, common... per doz. \$0 33. Square, common... 42. Octagon, common... 33. No. 5, square... 75. Cup point, knurled... 75. Rivet. Farmers'... per doz. \$1 20. Tinners'... 50%. Saw. Aiken's Pattern... per doz. \$3 50. Common Lever... 1 20. Disston's Monarch... 6 50. Disston's X Cut... 12 00. German... 1 50. Leach's... 80. Nash's Hand... 3 15. Nash's X Cut... 4 20. Stillman's Lever... 1 30. Stillman's X Cut... 2 50. SHARPENERS, SKATE. Diamond... per doz. \$1 60. Smith & Hemenway... 20%. SHAVES, SPOKE. Iron... per doz. \$1 10@1 85. Wood... 2 75@4 75. Bailey's... 50&5%. Goodell's... 15%. SHEARS. Pruning. Buckeye, No. 1... per doz. \$5 75. Buckeye, No. 2... 7 40. California Pat., 9-in... 3 20. California Pat., 10-in... 4 00. Draw Cut, No. 3... 13 75. Draw Cut, No. 4... 16 50. Henry's Pat. 0 01 14 012. Per doz... \$1 40 2 10 2 90 2 80. Star... per doz. \$4 00. Sheep?—No BBA. Inches... 6- 6 1/2 7. Reg. Grip... \$11.25 11.50 12.00. Nar. Grip, doz... 11.00 11.25 12.25. Tinners'—See Snips. SHEAVES, SLIDING DOOR. Common. Inches... 3 4 5. Per set... \$0.50 .65 .90. Hatfield's. Per set... \$0.80 1.10 1.80. SHELLS—See Ammunition. SHELLERS, CORN. Union... per doz. \$6 75. SHIELDS. Expansion Bolt Shields... 50&10%. SHOES. Conductor... 60&10%. SHOT—See Ammunition. SHOVELS AND SPADES. Coal. No 2 Woodford... per doz. \$5 50. No. 182... 6 00. Ames' new list... Discount, 12 1/2%. Neverbreak, hollow bck, blk. \$15 75. National... 14 75. Buckeye... 10 00. Mohawk... 9 00. Drain. Iwan's Perfection... 50%. Railroad, etc. Black Diamond... per doz. \$12 50. Crescent... 5 75. Keystone... 8 75. Star... 4 75. Vaterland... 9 50. Hollow Back... 4 50. Ames, new list... Discount, 12 1/2%. Snow. Per doz... \$1.05@\$.90. Alaska Steel. D Handle... per doz. \$3 50. Long Handle... 3 00. SINKS. Cast Iron. Painted... 50&10%. Enamelled, White... 50&10%. Wrought Steel. Painted, new list... 40-10&5%. SLEDGES—See Hammers. SNAPS, HARNESS. Champion... 33 1/2%. German Pattern... 30&5%. Judd's Pattern... 60%. SNATHS. Double Ring, Bush... per doz. \$6 50. Patent Loop, Bush... 7 00. Patent Loop, Grass... 6 00. SNIPS, TINNERS'. Clover Leaf... 40&10%. National... 40&10%. SOLDER—See Metals. SPRINGS, DOOR. Perfect. Nos... 1 2 3 4. Per doz... 30c 35c 40c 54c. Reliance. Per doz... light, \$1.15; heavy, \$2 50. Star. Per doz... light, 90c; heavy, \$1 35. Torrey's... per doz. \$1 35. Warner's No... 11 13. Per doz... 75c \$1 35.

SQUARES. Steel and Iron... 40% New List. (Add for bluing, \$2.50 per doz., net.) Miter. Try. Try and Bevel. Try and Miter. Fox's... per doz. \$3 00. Winterbottom's... 70%. SQUEEZERS, LEMON. Common Wood... per doz. \$0 70. Porcelain Lined, Wood... 1 25. Boss, malleable iron... 1 20. Iron Frame, porc'n bowl... 1 90. Iron Frame, glass bowl... 2 35. Little Giant, tin'd iron... 3 00. Drum, japanned... 4 00. Drum, nickel plated... 4 50. STAPLES. Blind. Barbed... per lb. 9 1/2 @ 9 1/2. Butter Tub... 8 @ 8 1/2. Fence—less than carload. Polished... per 100 lbs. \$2 05. Galvanized... 2 30. Netting. Galvanized... per 100 lbs. 4 00. Wrought. Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples... 80-10&10%. Extra heavy... 75&10%. STEELYARD. Discount 25%. STONES. Asx. Hindostan... per lb. 5 1/2 @ 7 c. More Grit... 9 1/2 c. Washita... 28 c. Emery... 60% @ 60&5%. Oil—Mounted. Arkansas Hard... per doz. \$23 00. Arkansas Soft... 15 50. Hindostan... per lb. 6 1/2 @ 6 1/2. Oil—Unmounted. Arkansas Hard... per lb. \$2 40. Arkansas Soft... 1 20. Lily White... 4 00. Queer Creek... 15. Ouachita... 38. Washita... 40. Scythe. Black Diamond... per gro. \$8 00. Crescent... 4 25. Gem Corundum... 7 50. Green Mountain... 4 50. La Moille... 7 00. Quinnebog... 6 00. Red End... 3 75. STOPS, BENCH. Hotchkiss... per doz. \$3 50. Stearns... 4 75. STOPPERS, FLUE. Common... per doz. \$0 40. Crown... 45. Gem, flat, painted... 85. Gem, cor'd, decorated... 70. Kirsh's... 90. Perfect... 70@85. Skinner's Commo' Sense... 80. STOVE PIPE—See Pipe. STOVE BOARDS—See Boards. STOVE POLISH—See Polish. STRAPS. Scoop... per doz. prs., \$1 80. Skate... 60@70. STRETCHERS. Carpet. Bullard's... per doz. \$3 90. Excelsior... 5 25. Malleable Iron... 70. Perfection... 6 30. King... 4 50. Wire. N. S. Elwood's... per doz. \$6 00. O. S. Elwood's... 6 00. Little Giant... 5 75. Safety... 10 00. Star Lever... 6 25. Canton Tackle Block... 9 50. Warner's... 6 25. SWIVELS. Malleable Iron... per lb. \$0 70. Wrought Steel... per gro. 4 50. TACKS. American Cut... 90&15%. American Wire... 85&20%. Bill Posters Cut... 90&35%. Blued Carpet... 90&10%. Tinned Carpet... 90&10%. Gimp... 90&10%. Upholsters' Cut... 90&30%. Upholsters' Wire... 90&10%. Double Pointed... 90%. Copper... per lb. 32c. Canvas Nails... 70%. Clout Nails... 70-5%. Hungarian Nails... 75%.

TAPES, MEASURING. Asses' Skin... 40&10%. Bend Leather... 20%. Patent Leather... 20%. Lufkin's Steel... 25%. Lufkin's Metallic... 30%. TEE BEVELS—See Bevels. THERMOMETERS. Tin Case... per doz. 80c@\$.1 25. Wood Back... \$2.00@12 00. Glass... 12 00. TIES. Bale. Single Loop... 80&5%. All other kinds... 70%. Cow—See "Chains." TOOLS, SAW. Disston's Universal... 40%. Miniature. Smith & Hemenway... 25%. TRAPS. Game. Newhouse... 50&5%. Victor... 75&10%. Tree Trap... 60%. Hawley & Norton... 65%. Jump... 70&5%. Stop Thief... 65%. Mole. Reddick's... per doz. \$6 00. Mouse and Rat. Out O'Sight mouse... per doz. \$0 60. Out O'Sight rat... 1 20. Hold Fast mouse... 20. Hold Fast rat... 75. Easy Set mouse... 35. " " rat... 1 00. Tin Chokers... 60. TROWELS. Brick. Clover Leaf... 30%. Brade's... 15&5%. Disston's... 30%. Rose's... 20%. Plasterers'. Clover Leaf... 40%. Disston's... 25%. W. & McP... 25%. TRUCKS. Bag... each, \$2 75. Warehouse... 50&10%. No... 1 2 3. Half Ironed... \$3.00 3.85 5.50. Full Ironed... 3.45 4.50 6.45. TUBS, WASH. Standard, Wood. Ex. Nos... 3 2 1 large. Per doz... \$5.00 6.00 7.00 9.50. Dowell. Per doz... 5.35 6.35 7.00 9.50. Cedar. Per doz... 6.10 7.10 7.90 10.80. Indurated. Per doz... 8.55 9.45 10.80 13.50. Galvanized. No... 1 2 3. Per doz... \$5.25 6.00 7.00. TWINE. Per lb. 3-ply Cotton Wrapping... 28c. 4 " " " " 28c. 4 " " " Extra Wrapping... 27c. 4 " " " Hvy. Wrapping... 25c. 4 " " " Wrapping on tubes... 27c. 3 " " " cones... 25c. 4 " " " " " 25c. India Hemp, 1-lb. balls... 21c. " " 1-lb. " " 20c. " " 1-lb. " doz. 75c. 2-ply Jute, 1-lb. " 16c. 3-ply Jute, 1-lb. " 15c. Jute Wrapping, 1-lb. balls... 14c. Jute Wool, 1-lb. balls... 9 1/2 c. Seins. Nos... 9 12 15. Soft... per lb. 32 31 30. Med... 32 31 30. Hard... 38 34 33. Staging, 1-lb. ball, size 21... 26 1/2 c. " " " 24... 26 1/2 c. " " " 27... 26 1/2 c. Bagging " " " 23c. 3-p y "B" in hanks... 18c. 4 " "B" " " 18c. 3 " "A" " " 27c. 3 " " " Silver Finish, in hanks... 37c. Fodder or Lath. 130 strand... 6 1/2 c. 200 strand... c. VISES. Phoenix... 30%. Phoenix Oval Slide. Inches... 2 1 3 3 1/2 4 1/2. Each... \$1.25 1.50 1.85 2.75. Parker's Parallel... 20%. Parker's Victor... 20%. Parker's Swivel Base... 20%. Parker's Re-inforced... 20%. Parker's X Series... 20%. Parker's Combination... 20%.

Solid Box... 40&5%. Williamson's Universal... 60%. WARE. Stove Hollow Ware. Plain or Unground... 50%. Ground Ware... 45%. Enamelled Ware... 33 1/2%. Country Hollow Ware, per 100 lbs. \$3 00. White Enamelled Ware. Maslin Kettles... 60&10%. Covered Ware. Tin'd and Turn'd... 35&10%. Enamelled... 45&10%. Glue Pots. Tinned... 25%. Enamelled... 30%. Enamelled. Cherry Blossom and Chrysolite... 50%. WASH BOARDS—See Boards. WASHERS. Standard O. G. cast iron... per lb. 2 1/2 c. Wrought iron in bulk, per lb.: In. 1/2 3/4 1 1 1/4 1 1/2 1 3/4 2. Wrought steel in 5-lb. boxes, per lb.: In. 1 1 1/2 1 3/4 1 1/2 1 3/4 1 1/2 1 3/4. WEDGES. Aw... per doz. \$0 30. Galling... per lb. 10 1/2. Saw... 8 1/2. WEANERS. Calf. Fuller's, per doz... \$2 00 to \$2 50. Tyler's Safety, per doz... 1 85 to 2 40. Carroll's, per doz... 3 00 to 3 75. Hoosier, per doz... 3 50 to 4 60. Shaw Perfected... 3 00 to 3 75. WEIGHTS. Hitching... per lb. 2 1/2 c. Sash—f.o.b Chicago... pr ton, 23 00. WHEEL BARROWS. Common Railroad... per doz. \$17 00. Heavy Railroad... 24 00. Panama Steel Tray... 39 00. Klondike Steel Tray... 28 00. WHEELS. Corundum... 70&10&5%. Emery... 75&5%. Well. Inches... 8 10 12 14. Per doz... \$2.40 3.25 4.00 15.00. WIRE. Barbed. Painted. Galv'd. Carloads... per 100 lbs. \$1 78 \$2 05. Less than car... 1 88 2 15. Brass. In coils... 20%. In 1-lb. spools, new list... 50%. Broom—Tinned... 60&10&10&10%. Cable—Same price as Barbed Wire. Copper. In coils... 20&10% 33 1/2%. 1-lb. spools, new list... 50&10%. Fence—Smooth. Nos. 6 to 9, An'eal'd, pr 100 lbs. \$1 80. Nos. 6 to 9, Galv'd... 2 10. Hair—New List... 60%. Market. Bright, full bdles... 70&5%. Bright, broken bdles... 70%. Coppered, full bdles... 70%. Coppered, broken bdles... 65&10%. Tinned, full bdles... 75&5%. Tinned, broken bdles... 65&10%. Picture—In coils... 80% @ 80&10%. In 5-lb. spools... 26c. Plain—Small lots... \$2 10. Car lots... 2 05. Small spools 5c per 100 higher. WRENCHES. Acme Standard... per doz. 50&10%. Alligator No. 1... 90c net. Always Ready... 50%. Agricultural... 75&5%. Ellis Adjustable... 25%. Malleable "S"... per lb. 08c. Stillson Pipe... 70&10%. Bemis & Call's. Adjustable S, 40&5%; Briggs Pattern, 40%; Combination Bright, 50%. Steel Handle Nut... 50&5%. Combination Black... 50&5%. Merrick Pattern... 50&5%. Double End Adj. S... 40&5%. WRINGERS. No. 22, Guarantee... per doz. \$43 50. No. 110, Guarantee... 43 50. No. 110, Brighton... 30 50. No. 500, Royal... 43 50. No. 350, Universal... 37 00. No. 300, Novelty... 38 50. No. 310, Keystone... 37 00. No. 100, Rival... 30 50. No. 380E, Universal... 42 00.

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Machinery—Special.	
Stoll Co., D. H., Buffalo, N. Y.....	

<p>Metal—Perforated. Harrington & King Perforating Co., Chicago, Ill.</p> <p>Metal Polish. Black Silk Stove Polish Works, Sterling, Ill. Nickel Plate Stove Polish Co., Chicago, Ill.</p> <p>Metal Shingles. Milwaukee Corrugating Co., Milwaukee, Wis. National Sheet Metal Roofing Co., Jersey City, N. J. Wheeling Corrugating Co., Wheeling, W. Va.</p> <p>Mica. Brauer Supply Co., A. G., St. Louis, Mo. Munsell Co., Eugene, New York and Chicago.</p> <p>Miters. Friedley-Voshardt Co., Chicago, Ill.</p> <p>Ornaments—Sheet Metal. Canton Art Metal Co., Canton, O. Friedley-Voshardt Co., Chicago, Ill. Gerock Bros. Mfg. Co., St. Louis, Mo.</p> <p>Ovens—Gas & Gasoline. Howes Co., S. M., Boston, Mass.</p> <p>Paint and Paint Specialties. Dixon Crucible Co., Jos., Jersey City, N. J. Hetzl, J. G., Newark, N. J.</p> <p>Paint—Roofing. Dixon, Jos., Crucible Co., Jersey City, N. J. Hetzl, J. G., Estate of, Newark, N. J.</p> <p>Plungers. Berger Bros. Co., Philadelphia, Pa.</p> <p>Presses. Canton Foundry & Machine Co., Canton, O. Stoll Co., D. H., Buffalo, N. Y.</p> <p>Punches. Bertsch & Co., Cambridge City, Ind. Niagara Machine & Tool Works, Buffalo, N. Y. Robinson Mfg. Co., J. M., Cincinnati, O. Stoll Co., D. H., Buffalo, N. Y. Weiss & Co., H., New York, N. Y.</p> <p>Radiators. Kellogg-Mackay Co., Chicago, Ill.</p> <p>Rasps. Delta File Works, Philadelphia, Pa. Heller Bros. Co., Newark, N. J.</p> <p>Registers. Henry & Scheible Co., Cleveland, O. Symonds Register Co., St. Louis, Mo. Omaha Stove Repair Works, Omaha, Neb. Walworth Run Fdy. Co., Cleveland, O. Waterloo Register Co., Waterloo, Ia.</p> <p>Roasters. Wheeling Corrugating Co., Wheeling, W. Va.</p> <p>Roofers' Supplies. Auld & Conger Co., Cleveland, O. Berger Bros. Co., Philadelphia, Pa.</p>	<p>Roofing—Iron and Steel. American Sheet & Tin Plate Co., Pittsburgh, Pa. Berger Bros. Co., Philadelphia, Pa. Canton Art Metal Co., Canton, O. Friedley-Voshardt Co., Chicago, Ill. Follansbee Bros. Co., Pittsburgh, Pa. Inland Steel Co., Chicago, Ill. La Belle Iron Works, Steubenville, O. Merchant & Evans Co., Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis. National Sheet Metal Roofing Co., Jersey City, N. J. Newport Rolling Mill Co., Newport, Ky. Osborn Co., J. M. & L. A., Cleveland, O. Stark Rolling Mill Co., Canton, O. Sykes Steel Roofing Co., Chicago, Ill. Wheeling Corrugating Co., Wheeling, W. Va. Youngstown Sheet & Tube Co., Youngstown, Ohio.</p> <p>Roof Paint. Dixon Crucible Co., Jos., Jersey City, N. J. Hetzl, Estate of J. G., Newark, N. J.</p> <p>Rope—Wire. American Steel & Wire Co., Chicago, Ill.</p> <p>Saw Sets and Saws. Smith & Hemenway Co., New York, N. Y.</p> <p>Schools—Sheet Metal Pattern Cutting. St. Louis Trades School, St. Louis, Mo.</p> <p>Screens—Perforated Metal. Harrington & King Perforating Co., Chicago, Ill.</p> <p>Screen Doors. Wabash Screen Door Co., Chicago, Ill.</p> <p>Screw Drivers. North Bros. Mfg. Co., Philadelphia, Pa.</p> <p>Shears—Sheet Metal. Bertsch & Co., Cambridge City, Ind. Fuller, Otis L., Goshen, Ind. Niagara Machine & Tool Works, Buffalo, N. Y. Robinson Mfg. Co., J. M., Cincinnati, O. Stoll Co., D. H., Buffalo, N. Y.</p> <p>Sheets—Black and Galvanized. American Sheet & Tin Plate Co., Pittsburgh, Pa. Berger Mfg. Co., Canton, O. Follansbee Bros. Co., Pittsburgh, Pa. Inland Steel Co., Chicago, Ill. La Belle Iron Works, Steubenville, O. Milwaukee Corrugating Co., Milwaukee, Wis. Newport Rolling Mill Co., Newport, Ky. Osborn Co., J. M. & L. A., Cleveland, O. Stark Rolling Mill Co., Canton, O. Sykes Steel Roofing Co., Chicago, Ill. Wheeling Corrugating Co., Wheeling, W. Va. Youngstown Sheet & Tube Co., Youngstown, Ohio.</p> <p>Sheets—Planished. Ward-Dickey Steel Co., Indiana Harbor, Ind.</p> <p>Sheets—Toncan Metal. Stark Rolling Mill Co.,</p>	<p>Shovels. Avery Stamping Co., Cleveland, O.</p> <p>Sifters—Ash. Diener Mfg. Co., Geo. W., Chicago, Ill.</p> <p>Skylight Gearing. Weiss & Co., H., New York, N. Y.</p> <p>Slate Roofing. Auld & Conger Co., Cleveland, O.</p> <p>Slating Nails. Hussey & Co., C. G., Pittsburg, Pa.</p> <p>Stampings. Avery Stamping Co., Cleveland, O. Stoll Co., D. H., Buffalo, N. Y.</p> <p>Stamping Machinery. Canton Foundry & Machine Co., Canton, O.</p> <p>Statuary. Friedley-Voshardt Co., Chicago, Ill.</p> <p>Stoves and Ranges. A. B. Stove Co., Battle Creek, Mich. Foster Stove Co., Ironton, O. Portsmouth Stove & Range Co., Portsmouth, O. Ringne Stove Co., St. Louis, Mo. Stove & Range Co., of Pittsburgh, Pittsburgh, Pa. Utility Stove & Range Co., St. Louis, Mo. Van Range Co., John, Cincinnati, O. Willard, Wm. G., St. Louis, Mo. Wrought Iron Range Co., St. Louis, Mo.</p> <p>Stove Boards. Wabash Screen Door Co., Chicago, Ill.</p> <p>Stove Patterns. Cleveland Castings Pattern Co., Cleveland, O. Cope Pattern Works, Geo. W., Detroit, Mich. Quincy Pattern Works, Quincy, Ill. Vedder Pattern Works, Troy, N. Y. Weller Pattern Co., Quincy, Ill.</p> <p>Stove Pipe and Fittings. Hemp & Co., St. Louis, Mo.</p> <p>Stove Polish. Black Silk Stove Polish Works, Sterling, Ill. Brauer Supply Co., A. G., St. Louis, Mo. Nickel Plate Stove Polish Co., Chicago, Ill.</p> <p>Stove Putty. Dixon Crucible Co., Jos., Jersey City, N. J.</p> <p>Stove Repairs. Brauer Supply Co., A. G., St. Louis, Mo. Omaha Stove Repair Works, Omaha, Neb.</p> <p>Supplies—Automobile. Motor Car Supply Co., Chicago, Ill.</p> <p>Tapes. Lufkin Rule Co., Saginaw, Mich.</p> <p>Technologist. Hooper, C. N., Dubuque, Ia.</p>	<p>Telephone Wire. American Steel & Wire Co., Chicago, Ill.</p> <p>Tin—Perforated. Harrington & King Perforating Co., Chicago, Ill.</p> <p>Tinners' Snips. Detroit Shear Co., Detroit, Mich.</p> <p>Tinners' Tools. Armstrong Blum Mfg. Co., Chicago, Ill. Auld & Conger Co., Cleveland, O. Berger Bros. Co., Philadelphia, Pa. Bertsch & Co., Cambridge City, Ind. Detroit Shear Co., Detroit, Mich. Double Blast Mfg. Co., No. Chicago, Ill. Fuller, Otis L., Goshen, Ind. Lufkin Rule Co., Saginaw, Mich. Niagara Machine & Tool Works, Buffalo, N. Y. Robinson Mfg. Co., J. M., Cincinnati, O. Stoll Co., D. H., Buffalo, N. Y. Weiss & Co., H., New York, N. Y.</p> <p>Tinplate. American Sheet & Tin Plate Co., Pittsburgh, Pa. Berger Mfg. Co., Canton, O. Follansbee Bros. Co., Pittsburgh, Pa. Merchant & Evans Co., Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis. Osborn Co., J. M. & L. A., Cleveland, O. Wheeling Corrugating Co., Wheeling, W. Va.</p> <p>Torches. Bernz, Otto, Newark, N. J. Burgess Soldering Furnace Co., Columbus, O. Clayton & Lambert Mfg. Co., Detroit, Mich. Diener Mfg. Co., Geo. W., Chicago, Ill. Double Blast Mfg. Co., No. Chicago, Ill.</p> <p>Trowels. Avery Stamping Co., Cleveland, O.</p> <p>Tubing—Seamless. Dieckmann Co., F., Cincinnati, O.</p> <p>Typewriters. Underwood Typewriter Co., New York City.</p> <p>Ventilators. Berger Mfg. Co., Canton, O. Globe Ventilator Co., Troy, N. Y. Lee, Thomas, Cincinnati, O. Merchant & Evans Co., Philadelphia, Pa. Milwaukee Corrugating Co., Milwaukee, Wis. Royal Ventilator Co., Philadelphia, Pa.</p> <p>Washing Machines. Brammer Mfg. Co., H. F., Davenport, Ia.</p> <p>Wheels. Motor Car Supply Co., Chicago.</p> <p>Wire. American Steel & Wire Co., Chicago, Ill. Pittsburgh Steel Co., Pittsburgh, Pa.</p> <p>Wrenches. Bemis & Call Hardware & Tool Co., Springfield, Mass.</p>
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Wants and Sales

For paid Yearly subscribers **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of six lines **WITHOUT CHARGE** for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, business for sale, partners wanted, to exchange, etc. Not exceeding fifty words, the price to non-subscribers is one dollar, payable in advance. Those who respond to these announcements will please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN."

PATENTS U. S. and Foreign Patents secured. Trade-Marks Registered. Patent Validity and Infringement Opinions.
Consulting Expert **HERBERT E. PECK** Patent Attorney
Established 1895 WASHINGTON, D. C. Barrister Bldg.

BUSINESS CHANCES.

For Sale or Exchange—Will sell or exchange for farm property, hardware and farm implement business in one of the best small towns of Northern Illinois. Stock which invoices about \$8,000.00. Sales above \$2,500.00. Retiring from business, as I am 78 years of age. Address P-87, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 26-3t

For Sale—Oldest and best located hardware store, shop included, in New London; 4,000 people; four big factories and best farming section in Wisconsin; two railroad junctions, high schools, city theater, church, and an excellent healthful location for business, home and family. Main store established 20 years. Investigate fully. Address S. Rickert, Association Dealer, Shawano, Wis. 26-1t

For Sale—On account of sickness and old age, I want to sell my patent, patterns, machinery and business of the Vaughn Cooking Range, the best range in the world. As for cooking and fuel saver, it cannot be beat. I have statements from a number of ladies that are using my range who say it is the best that is made. I will sell out cheap. Address B. A. Vaughn, Corning, Calif. 25-3t

For Sale—Hardware stock in good live town in Northern Iowa, good people, good school and good churches. Stock will invoice about \$4,000 to \$4,500. Death in the family reason for selling. Address P-80, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

For Sale or Exchange—Quarter section of prairie land in North Dakota. Would like stock of furniture or shelf hardware. What have you for exchange? Address P-81, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

For Sale—A first-class stock of hardware and farm machinery located in Southeast Minnesota, doing a good business, and will sell one-half interest or whole. Write or come and investigate. Stock will invoice about \$5,000.00. Address Solt & Jacobson, Dexter, Minn. 25-3t

Wanted—A good location for a tin, sheet metal and furnace, also plumbing shop. Will buy at once. What have you? Address P-82, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

For Sale—A good \$12,000.00 hardware stock in this growing residence and college town. Here is a live, profitable business that will stand the closest investigation. Large enough for two or more partners to make a splendid income. Easy terms of payment. Will sell or rent the building. Have been in business long enough; am ready to retire. Address G. L. Miles, Grinnell, Iowa. 25-3t

For Sale—A miscellaneous assortment of tools. Most of them are carpenters' tools. All are in first class condition. List of tools and prices furnished upon application. Address Lock Box 136, Saybrook, Ill. 24-3t

For Sale—Hardware store, south side, Chicago. Stock and fixtures invoice about \$4,600.00. No trades considered. An excellent opportunity. Address P-73, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 24-3t

BUSINESS CHANCES.

For Sale—Tin, plumbing, steam, hot water and hot air heating shop on the U. P. R. R., county seat town of 3,000 inhabitants; the only tinshop in town; the State Normal School and Experimental Station is here; also a 1,000-barrel flour mill. This is in the great wheat belt of Western Kansas. Have three heating jobs to put in now; also the plumbing and tin work. This is a proposition for a hustler to make money and will bear investigation, as there is a great deal of other work to be had. My reason for selling is I am 72 years old and not able to run the business. Address Lock Box 35, Hays City, Kans. 24-3t

For Sale—Good stock of hardware, tools and fixtures. I have reduced my stock, which will invoice January 1st about \$3,000.00. Have sold all my stoves. This is a new stock, good location, and have a good business, but have made arrangements to go into the heating business in a larger place, and must sell by February 1, 1912. I have a good tin shop, also a plumbing shop. For particulars write J. V. Hyder, York, Neb. 25-3t

For Sale—An up-to-date Sheet Metal and Roofing business in city of Chicago, located close to "loop." Cheap rent. Reason for selling is sickness. Price \$350.00. Might consider city hardware store in exchange. Address P-71, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 24-3t

For Sale—Tin shop with well established trade in thriving Northern Illinois town. Just the thing for a wideawake man with general knowledge of tin shop and furnace work. In busy season we have plenty of work for four men. Address P-75, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 24-3t

TINNER'S TOOLS.

Wanted—A second-hand 4-foot or 8-foot brake. Must be in good condition. Address A. C. Vieth & Co., Oakland, Calif. 25-3t

Wanted—Set of second-hand tinner's tools. Must be in fair shape. Address P-83, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

For Sale—One eight-foot Robinson Cornice Brake in excellent condition. Price \$100.00. Address P-75, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 24-3t

Tinners and Hardware Clerks—Write for our special offer to subscription solicitors. No experience required. Splendid opportunity to make money. AMERICAN ARTISAN, 537 South Dearborn St., Chicago, Ill.

HELP WANTED.

Wanted—Business man of ability and thorough salesman calling on general hardware and stove dealers, wants factory lines for exclusive territory in Pacific Northwest and coast. Would like to hear from manufacturers who wish to make connections with good representative. Best of references given, and correspondence strictly confidential. Address P-79, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

Tinners Wanted—To solicit subscriptions for the AMERICAN ARTISAN in their spare time. Write for our liberal cash commission offer. Circulation Department, AMERICAN ARTISAN, 537 South Dearborn St., Chicago, Ill.

SITUATIONS WANTED.

HIGH GRADE SALES MANAGER, with exceptional selling ability, desires to make new connections; have had fourteen years' experience in stove line; am thoroughly conversant in the general management of business, handling credits and office detail. Age 33 years. Temperate. Highest testimonials as to ability and character. Address A-75, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 22-1t

Situation Wanted—By an all-around tinner and furnace man with nine years of country-town experience and six years of city experience. Thirty years of age, sober and industrious. Please state wages. Address P-86, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 26-3t

SITUATIONS WANTED.

Situation Wanted — By young man, plumber. Can also do tinning, roofing and spouting, repair furnaces and ranges. Sober and steady. Would like permanent position, and will go any place at any time. Address P-88, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 26-1t

Wanted Position—By first class sheet metal worker and furnace man, good draftsman and able to take charge of shop. Address Emmett White, 511 N. Main St., Helena, Montana. 24-3t

Situation Wanted—As first class cutter and foreman in either jobbing or cornice shop. Address P-72, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 24-3t

Situation Wanted—By a first-class tinner and cornice maker, wishing a change. Has good experience as a draughtsman and can take charge of shop and outside work. Steady position wanted. Married, sober and reliable. Address F. A. Struck, 2110 Fifth Ave., Rock Island, Ill. 25-3t

Situation Wanted—As clerk in hardware store; married; 18 years' experience; first-class references; willing to come and show results. Address P-77, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

Situation Wanted—By a young man, 22 years of age, with six years' experience at the tinners' trade. A willing worker, no boozier, and will go any place. Address P-78, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 25-3t

SPECIAL NOTICES.

FOR SALE

Hardware store with tin shop in connection. In city of Chicago. Good location. Stock will invoice about \$5,000.00. Good reasons for selling. Please address "X Y Z," care of AMERICAN ARTISAN, 537 S. Dearborn St., Chicago, Ill. 26-3t

WANTED

Salesmen to sell Tin and Enamelled Ware on commission. Address A-75, care of AMERICAN ARTISAN, 537 S. Dearborn St., Chicago, Ill. 26-1t

AGENTS WANTED!

Tinners, Plumbers and in fact any mechanic that knows the troubles of the users of firepots and torches can pick up some easy money by taking the agency for the **SHERWOOD IMPROVED JACKETED PUMP** and the **JACKETED IMPROVEMENT** and **PUMP REPAIR OUTFIT**. On receipt of price we will send the Jacketed pump or the Jacket Improvement on **FREE TRIAL**; money and postage back if not satisfactory. Single Pump by mail \$1.10. Single Jacket Improvement and Pump repairs by mail 55 cents. In lots of 6 (six) or more by express, Pumps \$1.00 each, Jacket Improvements 50 cents each, F. O. B. Indianapolis, Ind. With a cash discount of 33 1/3 per cent on Pumps and 40 per cent on the Jacket Improvements. In all cases the money must be sent with the order. Give the length of pump over all that extends in the tank, as the pumps vary in length, but all are of one diameter.

Write today and secure the agency. It only has to be shown. Every user of a Firepot or torch is a prospect.

SHERWOOD MFG. CO.,
2127 N. Senate Ave.,
Indianapolis, Ind.

SPECIAL NOTICES.

WANTED

A high class coal and wood stove salesman to represent a well known trade mark house, in the State of Michigan. Only those having an established trade in this state need apply. Give references and address Davidson, % THE AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 13-ufn

WANTED

Experienced furnace man to buy established retail furnace business in one of the best big cities in the growing southwest. Address, Lennox Furnace Company, Marshalltown, Iowa. 23-3t

SPECIAL NOTICES.

STOVE SALESMEN WANTED

First-class salesmen for 1912 to represent us in Illinois and Wisconsin. Only those who have established trade in the territory will be considered. Good salary and commission to those who can get the business. We have complete line of Steel and Cast Iron Ranges and Heaters. Address The Independent Stove Company, Owosso, Michigan. 24-2t

WANTED

Salesmen for quick-selling, low-priced Solid Oak Line of Refrigerators; liberal commission; state territory covered. Address "Veri-Best," 854 Rose Bldg., Cleveland, Ohio. 24-3t

SPECIAL NOTICES.

WANTED

Salesman on commission or commission and salary, by manufacturer of Malleable and Cast ranges, base burners and furnaces. Write for information, and state territory desired. Address A-70, care of American Artisan, 537 South Dearborn St., Chicago, Ill. 25-ufn

WANTED

Stove Salesman for Texas. One that has an established trade, to sell a well-known and complete line of stoves and ranges in that state. Address, A-71, care of AMERICAN ARTISAN, 537 So. Dearborn St., Chicago, Ill. 22-4t

LEARN PLUMBING



STUDENTS do the actual work and may begin the course any time. The Technical training in addition to the shop work, is invaluable and not otherwise obtainable. Our FREE CATALOG tells of the cost, length of time usually required, etc. Ask for it.

ST. LOUIS TRADES SCHOOL
4471 Olive Street
ST. LOUIS, MO.



"SHEET METAL WORKERS" Learn Pattern-Drafting

this winter, so you will better your position and increase your earnings. Our Home Study courses give you the knowledge you require.

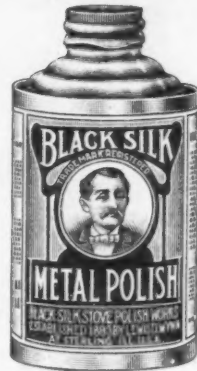
WRITE today—"NOW"—for our free booklet and other information.

THE NATIONAL SCHOOL
O. W. KOTHE, Prop. ST. LOUIS, MO.



WE WISH THE TRADE A PROSPEROUS AND

Happy New Year



THE LEADERS FOR 1912

BLACK SILK

STOVE POLISH

METAL POLISH

IRON ENAMEL

ORDER FROM YOUR JOBBER

BLACK SILK STOVE POLISH WORKS

STERLING, ILLINOIS

CANCO

THE KING OF ALL GARBAGE CANS



Made
With
Rollers.

Made
Without
Rollers.

This illustration gives an excellent idea of the Canco Roller Garbage Can.
Its strength and appearance are striking.

Canco Garbage Cans

If there is one thing that ought to give service and stand up through all kinds of usage and weather it is a garbage can. A cheap can is dear—an economic impossibility. **Canco Garbage Cans** are made on honor and have the strength and wearing qualities of a battleship. They have every good point possible to devise, made with and without rollers and because of their unquestioned superiority the cheapest cans on the market.

AMERICAN CAN COMPANY

Toledo

New York

Chicago

San Francisco



The Latest and Greatest Rust-Resisting, Corrosion-Defying Ferrous Metal

IS NOT like any other sheet on the market. And its differences are differences that COUNT. Made from our own strong Northern pig iron, it is more nearly pure iron than any "iron" sheet on the market; tho' we don't call it iron.



Is Different and Better

Different in process; different in raw materials; different in physical and chemical analysis—different and better.

It is NOT a burned-out steel.

Let us PROVE the goodness of VISMERA, showing how and why it resists rust and corrosion better than any other metal the art has produced. Send for samples.

INLAND STEEL COMPANY

First National Bank Building, Chicago

Works, Indiana Harbor, Indiana

BRANCH
OFFICES {

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Pioneer Press Building

ST. LOUIS
Chemical Building

DENVER
1618 Stout Street

DALLAS
Praetorian Building

MADISON, WIS.
929 Spaight Street



Not First In Time— First In Quality

*We were not among the first to make
open hearth steel in this country*

We kept out of the field until we could enter in a way that would justify our ideas of how open hearth steel should be made.

We got in when the pace was fast. We made our reputation when it was necessary to "go some" to attract attention from the judges' stand.

We won when the only thing that could win was *exceptional* merit.

Pig Iron	Merchant Pipe (bessemer)
Slabs	Line Pipe
Billets	Drive Pipe
Sheet Bars	Casing
Universal Plates	Cut Nails
Groove Rolled Plates	Skelp
Black and Galvanized Open Hearth Sheets	

All our products except merchant pipe are made by the open hearth process. They are ours "from mine to market."

La Belle Iron Works

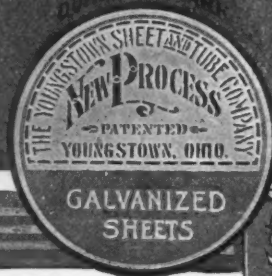
General Offices: Steubenville, O.

WORKS
Steubenville, O.

WORKS
Wheeling, W. Va.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

YOUNGSTOWN, OHIO



The thing to bear in mind about the *New Process* sheets is that they are *different* from other galvanized sheets.

They are made differently by a different and exclusive process. They must be either better or worse than other galvanized sheets, and the people who have used them say they are better. That verdict satisfies us that we were right in discontinuing our old style of galvanizing.

With our organization and complete control of manufacture, from ore to bundling table, we can make just as good sheets as anybody by any process. But we wanted to make the *best* sheets—hence the



We think you would like these sheets—most people who try them do.

Probably your jobber has them in stock, but in any case the mill will be glad to send you samples upon request. Write Dept. G.

DOUBLE
REFINED
PUDDLED

IRON ROOFING

DISTRICT SALES OFFICES

NEW YORK CITY	PHILADELPHIA, PA.
BOSTON, MASS.	CHICAGO, ILL.
PITTSBURG, PA.	DENVER, COLO.
DALLAS, TEX.	SAN FRANCISCO, CAL.



WHEELING CORRUGATING COMPANY

Mental Pictures of 1912's New Buildings and the improvements to existing ones are approaching reality. The season of planning is well advanced and actual operations will soon begin. The frost will soon leave the ground in most favorable locations and the business battle of the new year will be begun. Please remember the old reliable

WHEELING CORRUGATING COMPANY

when placing orders for the necessary Sheet Metals and Sheet Metal Products for the building activities in your vicinity. Full line of A-No. 1 Products at reasonable prices and for prompt shipment from nearest warehouse.

WHEELING CORRUGATING COMPANY, WHEELING, W. VA.

BRANCH OFFICES AND STORES:

NEW YORK
ST. LOUIS

CHICAGO
KANSAS CITY

PHILADELPHIA
CHATTANOOGA



LOOK FOR OUR REGISTERED TRADE MARK
ON EVERY SHEET



GENUINE OPEN HEARTH IRON

THE WORLD'S BEST

Rust-Resisting—Anti-Corrosive Sheets

(BLACK) (GALVANIZED)

USE IT FOR

Roofing, Siding, Eaves Trough, Conductor Pipe, Cornices, Skylights, Ventilators, Metal Window Frames, Fire Proof Doors, Tanks, Stacks, Corrugated Road Culverts, Ridge Roll, Gutter Lining, and all exposed Sheet Metal Work where a Rust-Resisting Metal is wanted.

Prices from Your Jobber or Sole Producer

NEWPORT ROLLING MILL CO., Newport, Ky.

E. R. Hensel Steel & Copper Co., Security Bldg.,
St. Louis, Mo.

S. H. Truitt & Co., Land Title Bldg.,
Philadelphia, Pa.
Doak Sheet Steel Co.,
San Francisco, Cal.

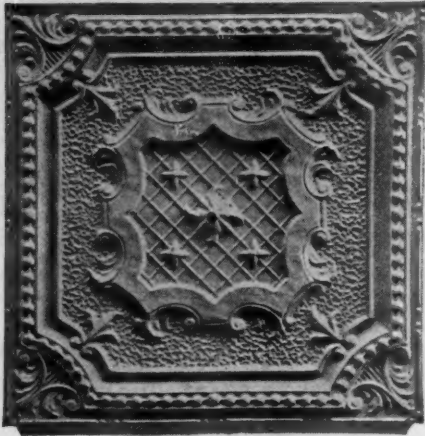
DISTRICT SALES AGENTS:

W. H. Daycock, Jr., Co. 81-83 Fulton St.,
New York, N. Y.

National Supply Equipment Co.,
McCormick Bldg., Chicago, Ill.
J. F. Lambert, 440 Audubon Bldg
New Orleans, La.

Robt. Elkel, Praetorian Bldg.
Dallas, Texas

R. E. Pate,
Denver, Colo.
Phoenix Warehouse Co.
Phoenix, Ariz.



The Steel Ceilings You Handle—

Do they net you a good, clean profit, or do you just about break even on some of your jobs?

Each and every steel ceiling you sell and erect will produce for you a profit—good, clean and fair—if you handle Berger's "Classik" Steel Ceilings.

For there are two most conspicuous points about Berger Steel Ceilings—they are easy to sell—they are easy to erect. That means better profits for you.

Just one way you can be convinced—try them on your very next job.

But write today to the nearest Berger Branch for a catalogue—it will sell steel ceilings for you.

THE BERGER MFG. CO.

New York
Chicago
Boston
Atlanta

CANTON, OHIO

St. Louis
Philadelphia
Minneapolis
San Francisco

We also manufacture Tin Plate, Black, Galvanized and painted Roofings, Eaves Trough, Hangers and Conductor Pipes, Ridge Roll, Cornices, Brick and Stone Siding Metal Tile, etc.

"BERGER'S"
Classik
METAL CEILINGS

4-8-1-11

M & E

**WE are the
FIRST to Publicly
Guarantee This Stand-
ard for Roofing Plates:**

*Forty Pounds of coating to
20x28 size. Fluxed with pure
Lagos Palm Oil.*

*Every sheet stamped with brand and
thickness. Open hearth base.*

"MERCHANT'S OLD METHOD"

Unparalleled in its combination of
weight and regularity of coating.
Unparalleled as to rigid assortment.
Unparalleled as to resquaring.

**We are manufacturers of the finest
quality of Roofing and Bright Tins**

Merchant & Evans Co.

(Premier Metal House in America)
PHILADELPHIA

New York Chicago Denver Kansas City Brooklyn Baltimore

Announcement

We have just issued a catalog on

THE "STAR" VENTILATOR

Standard Type.

THE "STAR" VENTILATOR

Fire Retarding Model "A"

THE "STAR" VENTILATOR

Fire Retarding Model "B"

and our recently developed
**"Star" Vent and Light
Structure.**



Standard



Fire Retarding
Model "A"



Fire Retarding
Model "B"



Standard



Fire Retarding
Model "A"



Fire Retarding
Model "B"

Please note in the opening pages of this new catalog we make reference to the fact that it would be impossible for us to illustrate all the buildings, up to date, on which "Star" Ventilators have been applied. It would require space many times larger than the entire booklet.

As an example, in a recent issue of the "Metal Worker," a ventilator manufacturer makes a point of the fact that he has supplied one concern with the 19th order, and this same concern have actually purchased from us and installed—their last contract being of recent date—over a hundred such contracts, so the public will please understand how impossible it is for us to publish the fact that we have received an order from "such and such" a concern. Send for catalog—FREE.

Reg. U. S. **MERCHANT & EVANS CO.**

M & E
Pat. Off.

The Largest Manufacturers of the Best
Ventilators in the United States

PHILADELPHIA

New York
Denver

Chicago
Baltimore


Brooklyn
Kansas City

WELLSVILLE
POLISHED

MANUFACTURED UNDER PATENTS
AUG. 2 1898 JUNE 13 1899
JUNE 25 1901 SEPT 10 1901
NOV. 17 1903

BLACK SHEETS

W. DEWEES WOOD CO'S
PATENT PLANISHED IRON



OF EVERY DESCRIPTION AND FOR EVERY KNOWN PURPOSE

American Bessemer and American Open Hearth Steel Sheets, Wellsville Polished Steel Sheets, Planished Iron Sheets, Stove Body and Furnace Stock, Etc.

Write for full information and quotations on Black and Galvanized Sheets, Tin and Terne Plates, Formed Roofing and Siding Products

Dist. Sales Offices
Chicago, Detroit
Cincinnati
Denver
New Orleans
New York

American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

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Philadelphia
Pittsburgh
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San Francisco
St. Louis

OSBORN'S
CHARCOAL IRON
OLD STYLE

The Best
Roofing Tin
Made

We carry 25 different brands of Charcoal Iron and Steel Base Ternes. Write for samples.

The
J. M. & L. A. OSBORN CO.,




points the way to more business for every sheet metal worker. The demand today is for durability, economy —and with



Rust-Resisting, Anti-Corrosive
Sheets

Gerock Bros.
Mfg. Co.

Sheet Metal
Ornaments
and Statuary

Detail Work
a Specialty

Ask for Catalogue

1227 Manchester Ave.
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you are in a position to meet this demand. You cannot compete with other roofing materials unless you can guarantee equal durability. Our "Corrosion Text Book" will tell you why Toncan Metal is the most durable of all iron base sheets. Write now for it.

The Stark Rolling Mill Co.,
Canton, O.

Black and Galvanized
Sheets and formed
products carried
by leading
jobbers.

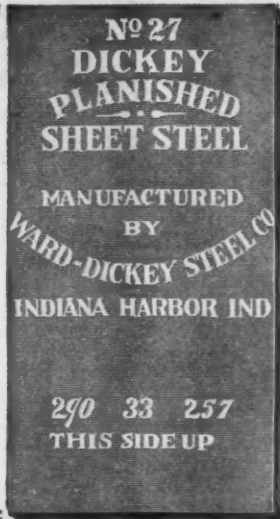


Dickey Planished Sheet Steel

This Steel is Hammer Polished. It has the imported Russia Iron finish.

Users say:

"It works like Copper—never breaks." Send for Circular and Prices.



Stands the Heat Retains Its Color

Under long and high heats it proves its superiority over all others.

"There's a reason."

It has an Alloyed Surface

FRIEDLEY-VOSHARDT COMPANY

MANUFACTURERS OF

Architectural Sheet Metal

Ornaments, Statuary, etc.

All Kinds of Stamped & Spun Work

Art Metal Ceilings and Side Walls

Send for Architectural Sheet Metal Catalog No. 31

General Offices, 733-737 S. Halsted St.
Factory, 761-771 Mather St.

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The Canton Art Metal Co.

"Quality Products"
Canton, Ohio

Eastern Branch:
Cor. 11th Ave. and West 25th St.
New York City

Western Branch:
206 South 3rd St.,
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Self-Locking, Burglar-Proof Coal Chutes



These Chutes can be unlocked from outside with a special key when desired, obviating the necessity of crawling over the coal pile. They are made in three standard sizes to meet every requirement.

Self-Locking, Burglar-Proof Coal Doors With Slanting Sills

Made in two sizes to meet the demand for a lower priced article than the Coal Chute. Unlocked only from inside.

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Metal Roofing and Siding Corrugated Sheets, painted or galvanized.
Metal Window Frames and Sash, glazed with wired glass.
Skylights.
Skylight Gearing.

Price list and estimates furnished upon request.

Sykes Steel Roofing Co.
108-120 West 19th Place
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BLACK SHEETS

OF EVERY DESCRIPTION AND FOR EVERY KNOWN PURPOSE

American Bessemer and American Open Hearth Steel Sheets, Wellsville Polished Steel Sheets, Planished Iron Sheets, Stove Body and Furnace Stock, Etc.

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Dist. Sales Offices
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Philadelphia
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Portland
San Francisco
St. Louis

OSBORN'S
CHARCOAL IRON
OLD STYLE

The Best
Roofing Tin
Made

We carry 25 different brands of Charcoal Iron and Steel Base Ternes. Write for samples.

The
J. M. & L. A. OSBORN CO.,
Cleveland

points the way to more business for every sheet metal worker. The demand today is for durability, economy—and with

Rust - Resisting, Anti - Corrosive
Sheets

Gerock Bros.
Mfg. Co.

Sheet Metal
Ornaments
and Statuary

Detail Work
a Specialty

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1227 Manchester Ave.
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The Stark Rolling Mill Co.,
Canton, O.

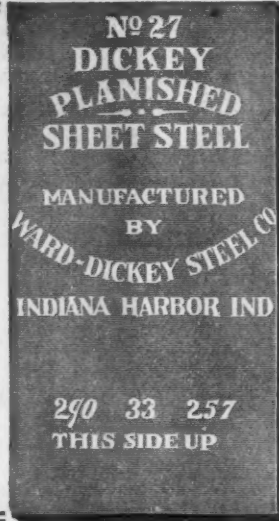
Black and Galvanized
Sheets and formed
products carried
by leading
jobbers.

Dickey Planished Sheet Steel

This Steel is Hammer Polished. It has the imported Russia Iron finish.

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"It works like Copper—never breaks." Send for Circular and Prices.



Stands the Heat Retains Its Color

Under long and high heats it proves its superiority over all others.

"There's a reason."

It has an Alloyed Surface

FRIEDLEY-VOSHARDT COMPANY

MANUFACTURERS OF

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Ornaments, Statuary, etc.

All Kinds of Stamped & Spun Work

Art Metal Ceilings and Side Walls

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No. 31

General Offices, 733-737 S. Halsted St.
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The Canton Art Metal Co.

"Quality Products"
Canton, Ohio

Eastern Branch:
Cor. 11th Ave. and West 25th St.
New York City

Western Branch:
206 South 3rd St.,
Minneapolis, Minn

Self-Locking, Burglar-Proof Coal Chutes

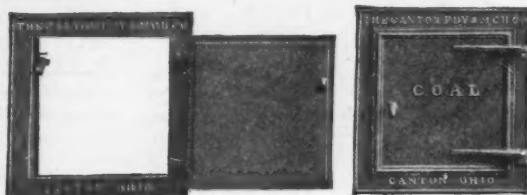


These Chutes can be unlocked from outside with a special key when desired, obviating the necessity of crawling over the coal pile. They are made in three standard sizes to meet every requirement.

Self-Locking, Burglar-Proof Coal Doors With Slanting Sills

Made in two sizes to meet the demand for a lower priced article than the Coal Chute. Unlocked only from inside.

We are also the manufacturers of a most complete line of Contractor's and Builders' Accessories.



Complete Catalogue and Prices sent on Request.

THE CANTON FOUNDRY & MACHINE COMPANY
804 E. EIGHTH STREET CANTON, OHIO



Metal Roofing and Siding Corrugated Sheets, painted or galvanized.

Metal Window Frames and Sash, glazed with wired glass.

Skylights.

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Price list and estimates furnished upon request.

Sykes Steel Roofing Co.

108-120 West 19th Place

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WHY buy EXPERIMENTS when the product of EXPERIENCE costs no more? I have long ago finished EXPERIMENTING and have correctly and satisfactorily solved the Ventilator problem. By using—

“LEE” VENTILATORS

you will find that they are the most simple to operate and are very attractive in appearance. I make them with or without Damper, with or without Glass Top, in copper or steel and in sizes to meet every requirement. Full particulars on request.

THOMAS LEE, 132 Second Avenue, CINCINNATI, OHIO



(The “Lee” Glass Top Ventilator with Glass Damper.)

We are willing to have you judge

“ROYAL” STORM PROOF VENTILATORS

only from the stand points of efficiency, strength and durability.

We do not attempt to compete with cheap ventilation. During a quarter century of studying ventilation problems we have developed certain scientifically accurate theories which are responsible for the superior ventilating power of Royal Ventilators. We have learned what materials to use and how to use them so as to secure maximum strength and durability at maximum cost.

“Royal Ventilators” will exhaust more air in a given time than any other ventilators. They are absolutely storm proof and will do perfect work day and night in all weather.

These statements are TRUTHS—not CLAIMS. We stand ready to prove them by the testimony of experienced architects, builders and factory owners who are now using Royal Ventilators on the most modern public buildings, schools and factories everywhere.

Made in round, square or rectangular shapes with glass or metal tops, and from galvanized iron, charcoal iron or cold rolled copper.

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THE ROYAL VENTILATOR COMPANY. Main Office and Factory—428 Locust Street, PHILADELPHIA



The “GLOBE” is built on honor and sold on merit.



The “GLOBE” Ventilator

in COPPER, GALVANIZED IRON and with Glass Tops for Skylight purposes.

ABSOLUTELY STORM PROOF

For Perfectly Ventilating Schools, Churches, Halls, Mills, Factory and Audience Rooms of Every Character.

SMOKY CHIMNEYS CURED

“GLOBE VENTILATED RIDGING”

SEND FOR PAMPHLET

Manufactured by

GLOBE VENTILATOR CO., Troy, N. Y.



EARL'S IMPROVED REVOLVING VENTILATOR

Runs in a self-lubricating bearing that is not affected by heat or cold, and never requires any oil or grease. The Fan revolves without any noise, producing a current of air upward, which positively prevents any down draft.

Write for circular.

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TIN PLATE, SHEET IRON, Etc.

Warerooms and Factory:

100-114 Broad St., PHILADELPHIA, PA.



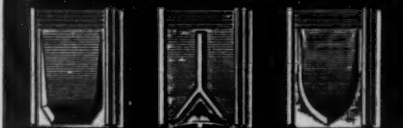
The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

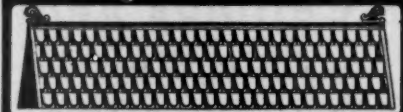
the “Proven Shield for Steel Work.” Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

WALTERS



Shingles that last



Made from Galvanized Tin and Painted Tin Storm, Rust and Fire Proof Do you want to increase your business? This is your opportunity. Write for catalogue, samples and prices.

National Sheet Metal Roofing Co. JERSEY CITY, N. J.

Roofing Slate

All Grades Manufactured and Sold by

The

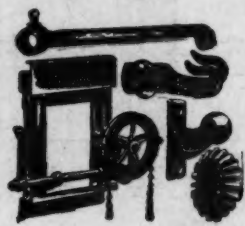
Auld & Conger Co.

999 Prospect Street **Cleveland** Stroh City

Roofers' Supplies, Tools, Lightning Slate Dresser, Etc.

WE MINE OUR OWN SLATE

Skylight Gearing



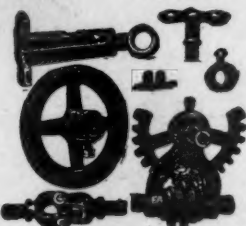
AND Chain Lifts

Tinsmiths,
Plumbers,
Cornice
Makers and
Copper-
smiths

TOOLS

Pipe
Threading
Machines

Second
Hand
Goods
Bought
and Sold

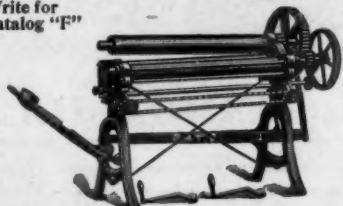


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20 Cliff Street, NEW YORK

31-Inch Forming Roll

Write for
Catalog "F"



This Forming Roll is built in all standard sizes, with our Patented Opening Device, by means of which it is opened and closed in a few seconds.
We build a complete line of Shears and Punches, all sizes, for hand or belt power.

BERTSCH & CO., Cambridge City, Ind.

Marvel Shear and Punch



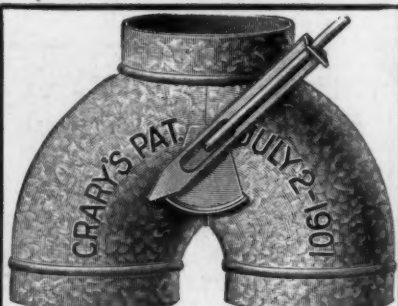
Cuts $\frac{1}{2}$ x 2 in., Flat $\frac{1}{2}$ to $\frac{3}{4}$ in. Round, Punches $\frac{1}{2}$ in. hole in $\frac{1}{2}$ in. stock; $\frac{3}{4}$ in. hole in $\frac{1}{2}$ in. stock.

The Best
All-Around
Shop Tool.

Write for Catalogue and Price of this and other Marvel Punches, Shears, Rod Cutters and Hack Saws.

ARMSTRONG-BLUM Mfg. Co.

346 N. Francisco Ave., Chicago, Ill.



Plain Round or Corrugated.

CUT-OFF

The Best and Most Practical.

Do Not Accept the "Just as Good"

Demand Crary's Patent.

ASK YOUR JOBBER FOR THEM

CONDUCTOR FITTING CO.

Marietta, Ohio.

CUTTING MADE EASY



Save Your Hands,
Your Temper and
Your Time

Use a snip that cuts easy, a snip that cuts to the point—

SEARIGHT'S COMPOUND

LEVER SNIP

will do it, and will do the work where others have failed.

You cannot afford to overexert yourself—but you will, if you don't use a **Searight's Compound Lever Snip.**

Detroit Shear Company

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THE "RAPID" SLITTING SHEAR

FOR ALL SHEET METAL WORKERS

Cuts No. 16 iron or lighter, any width up to 15 inches. Scale on table. Adjustable Bearings. Best Tool Steel Cutters. Weight about 300 lbs. Made for service. Cuts iron for valleys, ridge roll, gutter, cornice, skylight bars, etc. Very fast.

OTIS L. FULLER

GOSHEN, IND.

Keystone Bar Folder



Tools for Sheet Metals

INCLUDING

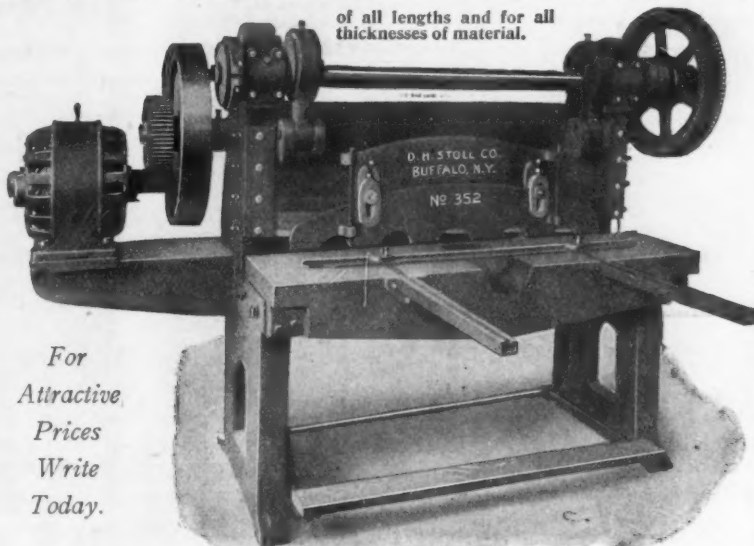
Tinners' and Roofers' Tools
Shears, Punches, Presses and
Dies, Can-Making Machinery

MADE BY

NIAGARA MACHINE & TOOL WORKS
BUFFALO, N. Y.

MOTOR DRIVEN SHEARS

of all lengths and for all
thicknesses of material.



For
Attractive
Prices
Write
Today.

We also make all styles and sizes of Power Presses, Dies and Special Machinery.

D. H. STOLL CO., 31 Lansing St. Buffalo, N. Y.

SQUARE Corrugated STYLE A

Made in All Angles



One Piece Square Expanding No Seams

CONDUCTOR ELBOWS and SHOES

TRADE

WITH THE *F. Dieckmann* MARK

Stamped in Them

Made in All Angles

Each Elbow Made of Special Materials. Has Name of Materials Stamped in It. Fit all Makes of Conductor Pipe Made in Galvanized Steel, American Ingot Iron, Toncan Metal, Charcoal Iron, Newport Genuine Open Hearth Iron, 12-14-16-oz. Copper, Old Fashion Iron, Portsmouth Iron.

THE FERDINAND DIECKMANN CO.

CINCINNATI, OHIO



SQUARE Corrugated STYLE B

Plecker's Corrugated Expanding Conductors

Have no cross seams. Made of galvanized iron in 10 ft. lengths.



Will not burst when full of ice.

THE CLARK, SMITH HARDWARE CO., PEORIA, ILL.

Y A L E

Russia finish, pat. Lock

STOVE PIPE

It is made of a very high grade of uniform color Blue Polished Steel and is coated to prevent rusting. Made in all sizes. Packed twenty-five and fifty joints to crate. For sale by the Jobbing Hardware Trade throughout the United States. Mfg. by HEMP & CO. ST. LOUIS, MO.

in the event of your jobber does not handle this pipe send your inquiries to us.



The **"CENTENNIAL"**

RAIN-WATER-CUT-OFF

The strongest, most durable and cheapest CUT-OFF on the market.

The only single cut-off made to fit Corrugated and plain pipe and which can be fixed without extra pipe or elbows. For sale by all leading jobbers.

Manufactured only by **The Sullivan-Geiger Co.**

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Copper Conductors

Copper Eavestrough

Copper Elbows and Shoes

COPPER

Rivets—Sheets—Soldering Coppers

Nails—Plates—Washers—

Tacks—Rolls—Gaskets

Write for Prices.

C. G. HUSSEY & CO.,

PITTSBURGH, PA.

Retail Advertising Trade Books

That give you strong, practical material for writing ads in your particular line of business. Reproductions of striking display ads, selling phrases, store talks—the best advertising manuals ever written on

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- Jeweler's Advertising
- Grocer's Advertising
- Footwear Advertising
- Tobacconist Advertising
- Men's-wear Advertising
- Coal Dealer's Advertising
- House Furnishing Advertising
- Bakery and Confectionery Advertising

\$2.00 The Copy

30 Days

No More

C. N. HOOPER

DUBUQUE, IOWA

Vitreous Enameling TECHNOLOGIST

Designs, builds and starts new plants, improves quality and reduces cost, in those already established.

The Biggest Combination Ever Printed

Every Business Every Line in Every Trade Every Issue

When You Want to—

write an ad
start a sale
dress a window
get up a circular
lay out a display ad
send out form letters
build up a mailing list
arrange a mail order plan
know just what or when or how to advertise and build your business

You Will Want—

BRAINS

FIVE DOLLARS THE YEAR

The only weekly in the world of, by and for the retail advertiser.

Agents Wanted—Write for Good Territory Now

CUT THIS OUT

THE AMERICAN ARTISAN AND HARDWARE RECORD

Daniel Stern, Publisher and Proprietor
537 South Dearborn Street, CHICAGO

Please send us THE AMERICAN ARTISAN each week for three months. At the end of that time we will remit Two Dollars for one year's subscription, or 50 cents in case we decide to discontinue.

Name.....

Address.....

Town..... State.....

BRAINS CORPORATION,
Scranton, Pa.

Let me have your 30 day offer for BRAINS and your Retail Advertising Trade Books together with prospectus of your Cyclopaedia.

Name.....

Address.....

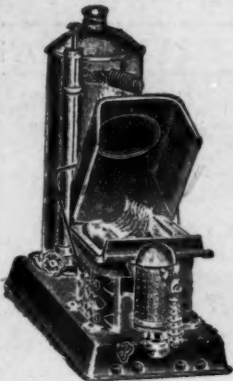
City.....

State.....

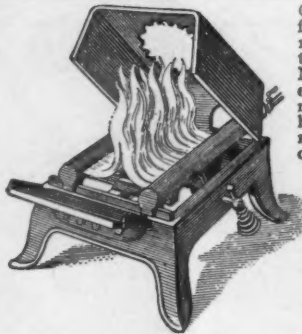
Business.....

Are You Still Using That Old Style Type of Firepot?

If so, then you're the very fellow we want to reach? Read this ad—it's bound to interest you—and that special offer, too—then write us.



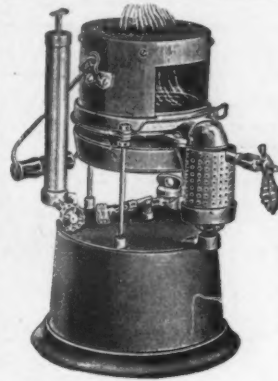
Here is our No. 25 Double Blast Firepot. In a class by itself. If two flames can do the work of one in half the time, it is easy to see that there is 50 per cent time saved. If time is money to you—investigate.



Our No. 45 is for the use of natural or artificial gas. Note the novel arrangement of the hood. When removed, pipe can be heated.

It is constructed with a gas cock for each burner. Also note the little wire handles on the sides which per-

mits the user to move the burners closer together or farther apart.



This cut shows the No. 35 Firepot. Very heavily constructed. It is really two pots in one. You can heat irons and melt lead at the same time. Note that independent generating valve. Right in front where you can "get at" it.

Special Offer: We want every tinner and plumber to see and examine the **Double Blast** feature on our firepots. We have decided to ship one of these firepots to you and let you use it for 10 days. If it is not what we claim it to be, then return it at our expense. By the way, let us send you our catalog. It will interest you.

Double Blast Manufacturing Company

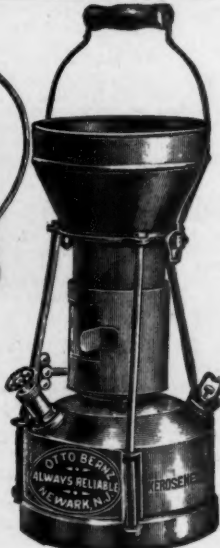
North Chicago, Illinois



Roofing Shield, Price \$1.00



Combination Shield, Price \$1.00



"Always Reliable" B Kerosene Furnace. Price \$7.00

The "Always Reliable," Kerosene Furnace, equipped with one of these shields, makes positively the best and safest soldering Furnace on the market.

Jobbers sell at above prices, or we will ship direct if cash accompanies the order.

MANUFACTURED BY

OTTO BERNZ, Newark, N. J.

Cold Weather



Cut No. 1 Fire Pot Price each \$6.00 Net

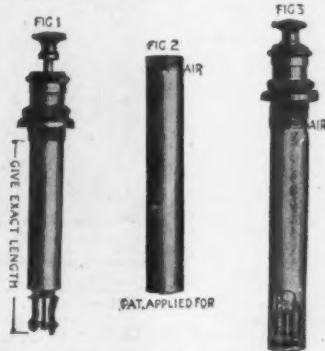
or we will ship direct if cash accompanies the order.

Send for Booklet—it's free

Clayton & Lambert Mfg. Co.
Detroit, Mich., U. S. A.

SHERWOOD'S JACKET IMPROVEMENT

is what you have long been looking for. Do you realise the danger from fire when the pump on your Torch or Firepot is out of order. This is an absolute protection of the pump from the gasoline and the gasoline from the lubricating oils.



Sherwood's Improved Jacketed Pump

We have such confidence in the Jacket Improvement that in order to show those who have trouble with their pumps, we will mail free of charge to any one doing business, one of them for inspection, and if for any cause they do not like it they can return it with the postage that we send in the package for that purpose. Write today for our descriptive circulars.

SHERWOOD MANUFACTURING CO.

2127 Senate Ave., INDIANAPOLIS, INDIANA

ASK YOUR DEALER FOR THE *Sem* SOLDERING FURNACE

And You Will Make NO MISTAKE.



Always Ready—No Smoke—No Odor—No Noise—Unexcelled—Unequaled—Unrivaled—Safe—Sure—Durable.

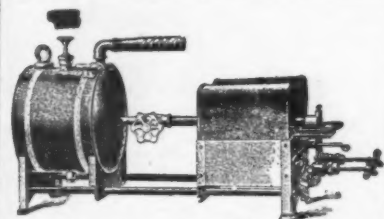
Galvanized Iron, Brass or Copper Reservoir. Equipped with Cylindrical Slotted Burner.

MADE ONLY BY

BURGESS SOLDERING FURNACE CO.
COLUMBUS, OHIO, U. S. A.

Advertising Pulls

"If there is one thing on earth that a quitter should leave severely alone, it is advertising," says John Wanamaker. "To make a success of advertising one must be prepared to stick to it like a barnacle on a boat's bottom. Advertising doesn't jerk; it pulls. It begins very gently at first, but the pull is steady. It is likened to a team pulling a heavy load. A thousand spasmodic, jerky pulls will not budge that load, while one-half the power in steady effort will start it and keep it moving."



THE TINNER'S FRIEND "QUICK MEAL" SOLDERING FURNACE
QUICK, POWERFUL and DURABLE

Heavy Brass Tank with Brass Pressure Pump. Will Heat any size Soldering Iron. Suitable for bench or outside work. Special price made to tinner.

RINGEN STOVE CO.
Division of American Stove Co.
Manufacturers ST. LOUIS, MO.

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The publisher of AMERICAN ARTISAN will take pleasure in supplying Books of whatever character, at catalogue prices, prepaid by express, to any address, on receipt of price. The following are in lines especially represented by this journal.

NO BOOKS EXCHANGED

SHEET METAL WORKING

TINNERS' HELPER AND PATTERN BOOK.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pp. 53 figures. Price, \$1.00.

GRAY'S PERFECT ELBOW PATTERNS

On heavy blue print paper. Set A—From one inch to 20 inches, 80 patterns; price \$1.50 prepaid. Set B—From 20 inches to 40 inches, 80 patterns; price \$1.50 prepaid. Sets A and B together, and Angle Chart; price \$3.00 prepaid.

XXTH CENTURY SHEET METAL WORKER.

By H. E. Osborne, a practical sheet metal worker. A brand new book. Just off the press. Exactly what its title implies—a XXth century treatise on sheet metal work. Price, \$1.00, cloth bound; 60 cents, flexible cover.

SHEET METAL WORKERS' GUIDE.

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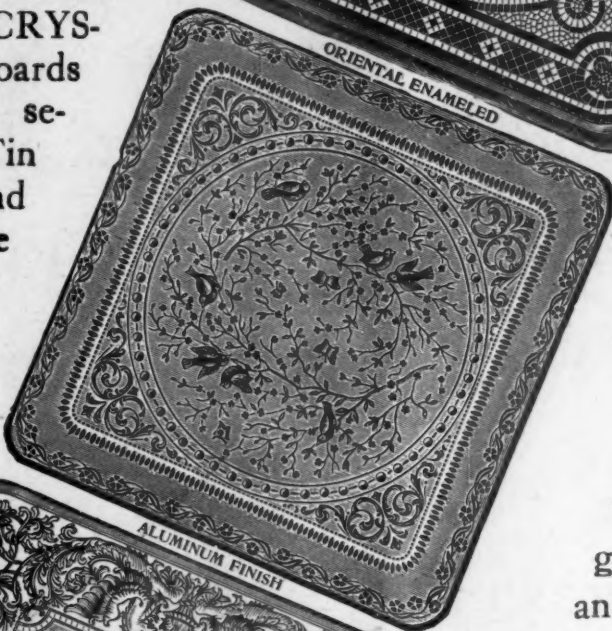
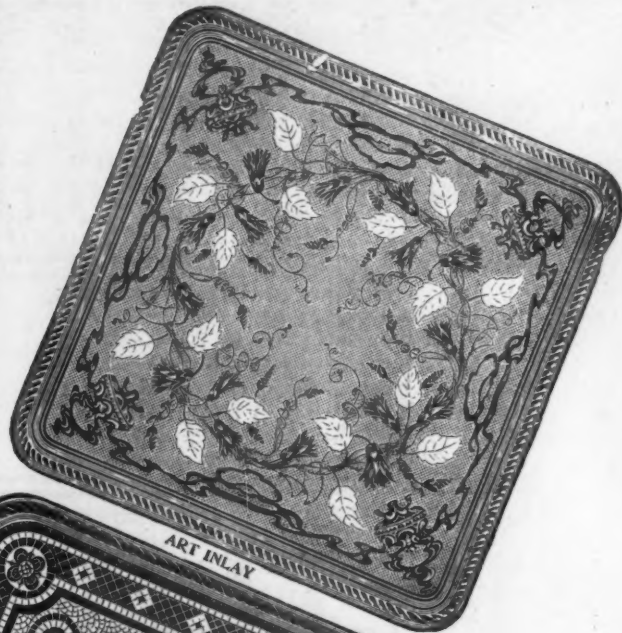
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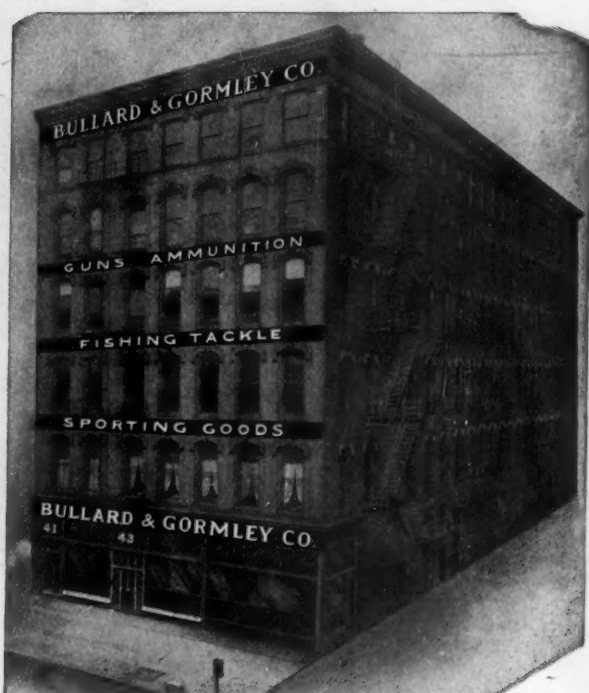
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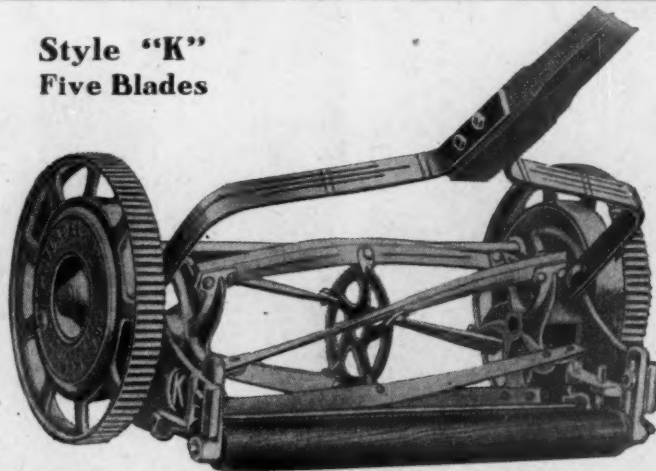
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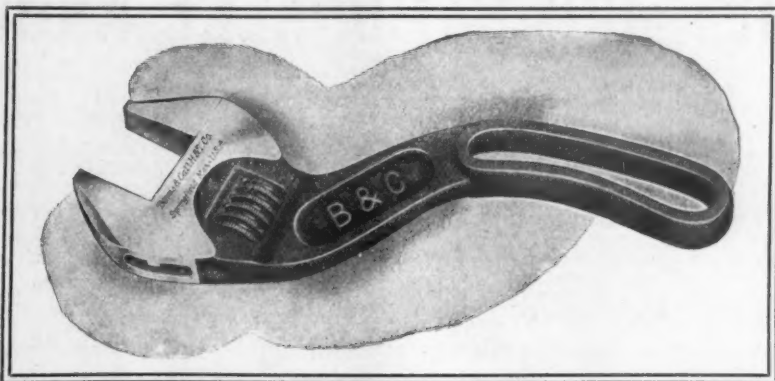
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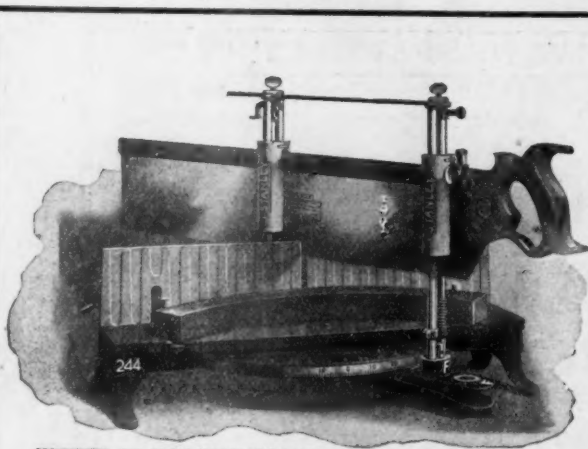
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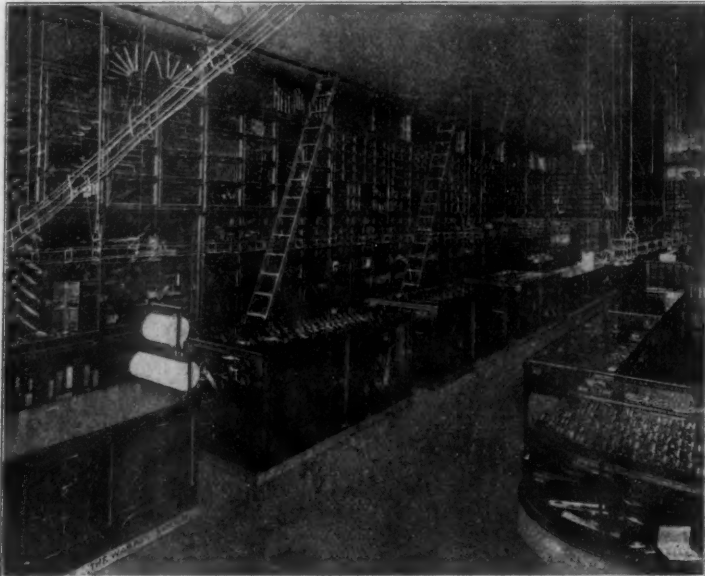
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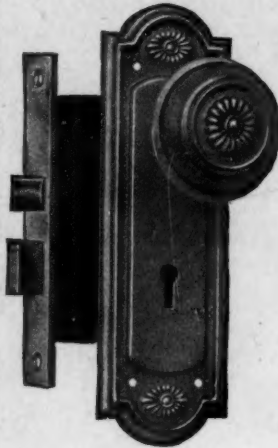
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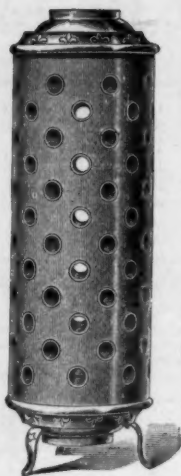
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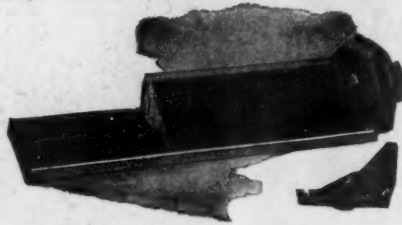
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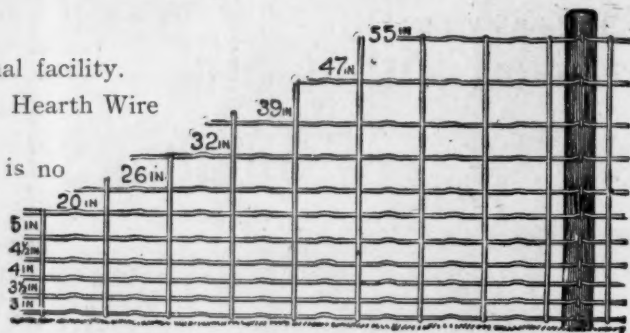
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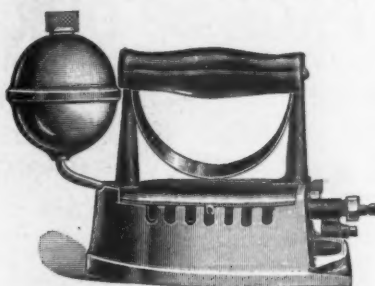
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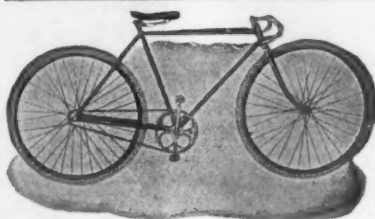
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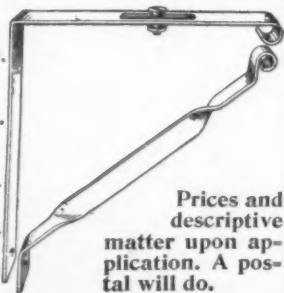


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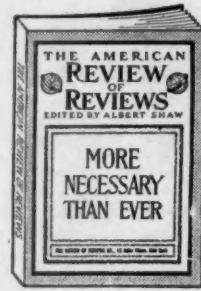
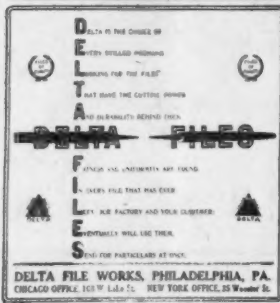
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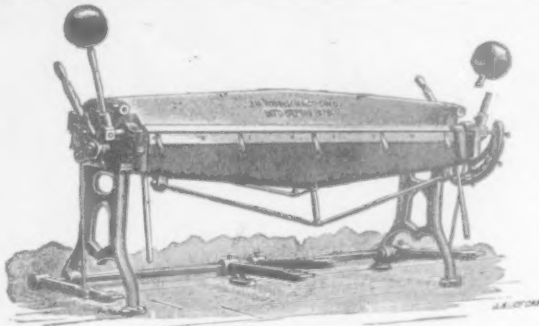
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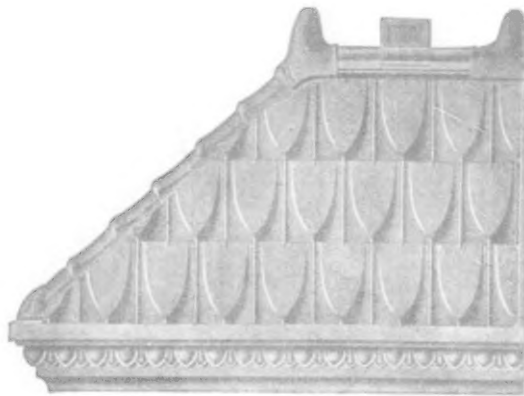
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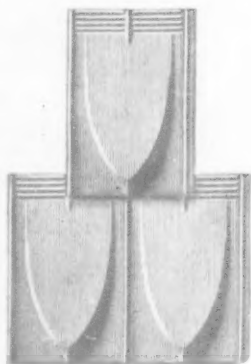
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